



**Dan Skopec**  
Acting Agency Secretary

# California Regional Water Quality Control Board

## San Francisco Bay Region

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**Arnold Schwarzenegger**  
Governor

**ORDER NO. R2-2006-0029**

**NPDES NO. CA0005002**

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

<b>Discharger</b>	<b>USS-POSCO Industries</b>
<b>Name of Facility</b>	<b>Pittsburg Plant</b>
<b>Facility Address</b>	<b>900 Loveridge Road</b>
	<b>Pittsburg, CA 94565</b>
	<b>Contra Costa County</b>

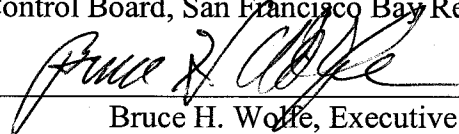
The Discharger is authorized to discharge from the following discharge points as set forth below:

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude</b>	<b>Discharge Point Longitude</b>	<b>Receiving Water</b>
001	Combined industrial process wastewater, cooling water, and storm water	38 °, 01', 48" N	121 °, 51', 32" W	New York Slough
002	Storm water	38 °, 01', 51" N	121 °, 51', 58" W	New York Slough

This Order was adopted by the Regional Water Board on:	<b>May 10, 2006</b>
This Order shall become effective on:	<b>July 1, 2006</b>
This Order shall expire on:	<b>June 30, 2011</b>
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Water Board have classified this discharge as a major discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 00-130 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted therein, and the provisions of the Federal Clean Water Act (CWA), and regulations and guidelines adopted therein, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 10, 2006.

  
Bruce H. Wolfe, Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
REGION 2, SAN FRANCISCO BAY REGION**

ORDER NO. R2-2006-0029  
NPDES NO. CA0005002

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	Attachment H – The following documents are part of this Permit, but are not physically attached due to volume. They are available on the internet at <a href="http://www.waterboards.ca.gov/sanfranciscobay/">www.waterboards.ca.gov/sanfranciscobay/</a>	
	- Standard Provisions and Reporting Requirements, August 1993	
	- Self-Monitoring Program, Part A, adopted August 1993	
	- August 6, 2001 Staff Letter: <i>Requirement for Priority Pollutant Monitoring in Receiving Water and Wastewater Discharges</i>	
	- Resolution 74-10: <i>Policy Regarding Waste Discharger's Responsibilities to Develop and Implement Contingency Plans</i>	

## I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	USS-POSCO Industries
Name of Facility	Pittsburg Plant
Facility Address	900 Loveridge Road
	Pittsburg, 94565
	Contra Costa County
Facility Contact, Title, and Phone	David Allen, Sr. Environmental Engineer, (925) 439-6290
Mailing Address	P. O. Box 471, MS#67, Pittsburg, CA 94565
Type of Facility	Steel Finishing Plant
Facility Design Flow	28 million gallons per day (MGD)

## II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Regional Water Board), finds:

- A. **Background.** USS-POSCO Industries (hereinafter Discharger) is currently discharging under Order No. 00-130 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005002. The Discharger submitted a Report of Waste Discharge, dated May 31, 2005, and applied for a NPDES permit renewal to discharge up to 28 MGD of treated wastewater from USS-POSCO Industries, hereinafter Facility. The application was deemed complete on June 1, 2005.
- B. **Facility Description.** The Discharger owns and operates the steel finishing plant. The treatment system consists of oil separation, flocculation, clarification, and final pH adjustment. Wastewater is discharged from Discharge Point 001 (see table on cover page) to New York Slough, a water of the United States and a contiguous water body of the Sacramento-San Joaquin Delta within Suisun Basin. Attachment B provides a topographic map of the area around the facility. Attachment C provides a flow schematic of the facility.
- C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.
- D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachments A through H, which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

- E. **California Environmental Quality Act (CEQA).** This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.
- F. **Technology-based Effluent Limitations.** The Code of Federal Regulations (CFR) at 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on 40 CFR Part 420 Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Iron and Steel Manufacturing, and 40 CFR Part 433 Metal Finishing Point Source Category. The Regional Water Board has considered the factors listed in CWC §13241 in establishing these requirements. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).
- G. **Water Quality-based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed state criteria or a state policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter. A detailed discussion of the WQBELs development is included in the Fact Sheet (Attachment F).
1. **Constituents identified in the 303(d) List.** On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State (the 303(d) List). The State had prepared the 303(d) List pursuant to provisions of section 303(d) of the CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The pollutants impairing the Sacramento-San Joaquin Delta include chlordane, DDT, diazinon, dieldrin, dioxin and furan compounds, mercury, nickel, total PCBs, PCBs (dioxin like), and selenium.
- H. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin, *Water Quality Control Basin (Region 2)*, (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page 2-5 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for New York Slough, but does identify present and potential uses for Sacramento-San Joaquin Delta, to which New York Slough is a contiguous water body of the Sacramento-San Joaquin Delta within the Suisun Basin. These beneficial uses are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 002	Sacramento-San Joaquin Delta	Agricultural Supply (AGR), Municipal and Domestic Supply (MUN), Groundwater Recharge (GWR), Industrial Service Supply (IND), Industrial Process Supply (PROC), Ocean Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Fish Migration (MIGR), Preservation of Rare and Endangered Species (RARE), Water Contact Recreation (REC-1), Noncontact Water Recreation (REC-2), Fish Spawning (SPWN), Wildlife Habitat (WILD), and Navigation (NAV).

- I. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

- J. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

- K. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board subsequently amended the SIP, and the amendments became effective on May 31, 2002. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.

1. **Requirement for Additional Monitoring.** On August 6, 2001, Regional Water Board staff sent a letter to all permitted dischargers pursuant to Section 13267 of CWC requiring the submittal of effluent and receiving water data on priority pollutants, hereinafter referred to as the "August 6, 2001 Letter". Pursuant to the August 6, 2001 Letter, the Discharger collected and analyzed priority pollutants during the years 2001 through 2005. Details of these data and the rationale for the additional monitoring required in this Order are provided in the Fact Sheet (Attachment F).
2. **Regional Monitoring Program.** On April 15, 1992, the Regional Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program (RMP) for the San Francisco Bay. Subsequent to a public hearing and various meetings, Regional Water Board staff requested major permit holders in this region, under authority of Section 13267 of California Water Code, to report on the water quality of the estuary. These permit holders, including the Discharger, responded to this request by participating in a collaborative effort, through the San Francisco Estuary Institute. This effort has come to be known as the San Francisco Bay Regional Monitoring Program for Trace Substances. Details of the Discharger's participation and support of the RMP are provided in the Monitoring and Reporting Program (Attachment E) and the Fact Sheet (Attachment F) of this Order.

- L. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in a NPDES permit. Unless an exception has been granted

under Section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does include compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) is included in the Fact Sheet (Attachment F).

- M. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the Federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the Federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.
- N. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and Federal regulations at 40 CFR § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All water quality based effluent limitations in this Order are at least as stringent as in the previous permit. Some technology based effluent limitations in this Order are less stringent than those in the previous permit. As discussed in detail in the Fact Sheet (Attachment F) this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and Federal regulations.
- O. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (hereinafter MRP) establishes monitoring and reporting requirements to implement Federal and State requirements. This MRP is provided in Attachment E.
- P. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order Standard Provisions and Reporting Requirements applicable to all NPDES dischargers (Attachment H).
- Q. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

R. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

### III. DISCHARGE PROHIBITIONS

- A. Discharge of any wastewater at a location or in a manner different from that described in this Order is prohibited.
- B. The bypass or overflow of untreated or partially treated process wastewater to waters of the State, either at the treatment plant or from the collection system, is prohibited.

### IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

#### A. Effluent Limitations – Discharge Point 001 and Discharge Point 002

##### 1. Final Effluent Limitations

##### Discharge Point 001

- a. The discharge of combined industrial process wastewater, cooling water, and storm water shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP (Attachment E):

Parameter	Units <sup>(1)</sup>	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH <sup>4</sup>	Standard Units			6.5	8.5
Temperature	°F				93
Settleable Matter	ml/l/hr	0.1	0.2		
Total Suspended Solids	lbs/day	2365	5139		
Oil and Grease	lbs/day	1025	2391		
Copper	µg/L	3.3	5.5		
Cyanide	µg/L	0.5	1.0		
Effective Starting: April 28, 2010					
Lead	lbs/day	15.5	31.5		
Zinc	lbs/day	5.6	16.9		
Total Chromium	lbs/day	42.8	69.4		
Total Nickel	lbs/day	59.6	99.6		
Total Silver	lbs/day	6.0	10.8		
Naphthalene	lbs/day	--	0.68		
Chlorodibromomethane	µg/L	0.4	0.8		
Effective Starting: May 18, 2010					
Dichlorobromomethane	µg/L	0.6	1.1		
Effective Starting: May 18, 2010					
Tetrachloroethylene	lbs/day	--	1.03		

[1] Unit Abbreviations:

°F = Degree Fahrenheit  
lbs/day = pounds per day  
ml/l/hr = milliliters per liter, per hour  
µg/L = micrograms per liter

- b. Alternative Cyanide Effluent Limitation. If a cyanide site-specific water quality objective (SSO) for the receiving water becomes legally effective, based on the assumptions in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005, and as summarized in the Fact Sheet, then, upon its effective date, the following effluent limitations shall supersede those specified in A.1.a, above.

Maximum Daily of 18.6 µg/L, and Monthly Average of 9.3 µg/L

- c. Whole Effluent Acute Toxicity. Representative samples of the discharge at Discharge Point 001 shall meet the following limits for acute toxicity. Compliance with these limits shall be achieved in accordance with Section V.A of the attached MRP (Attachment E):

- (1) The survival of bioassay test organisms in 96-hour flow-through bioassays of undiluted effluent shall be:
- (a) An eleven (11)-sample median value of not less than 90 percent survival; and
  - (b) An eleven (11)-sample 90th percentile value of not less than 70 percent survival.

- (2) These acute toxicity limits are further defined as follows:

- (a) 11-sample median limit:

Any bioassay test showing survival of 90 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or fewer bioassay tests also show less than 90 percent survival.

- (b) 90th percentile limit:

Any bioassay test showing survival of 70 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or fewer bioassay tests also show less than 70 percent survival.

- d. Whole Effluent Chronic Toxicity. Representative samples of the discharge at Discharge Point 001 shall meet the following limits for chronic toxicity.

- (a) A three-sample median value of equal to or less than 5 TUc; and
- (b) A single-sample maximum value of equal to or less than 10 TUc.

Compliance with these limits shall be achieved in accordance with Section V.B of the attached MRP (Attachment E).

These chronic toxicity limits are defined as follows:



- (a) A test sample showing chronic toxicity greater than 5 TUC represents consistent toxicity and a violation of this limitation, if one or more of the past two or less tests show toxicity greater than 5 TUC, and
- (b) a test sample showing chronic toxicity greater than 10 TUC represents an additional violation of this limitation.
- (c) A TUC equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEC values. These terms and their usage in determining compliance with the limitations are defined in the Attachment G of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified by the Executive Officer. The Executive Officer may specify two compliance species if test data indicate that there is alternating sensitivity between the two species. If two compliance test species are specified; compliance shall be based on the maximum TUC value for the discharge sample based on a comparison of TUC values obtained through concurrent testing of the two species.

Should a violation of the chronic toxicity effluent limitation(s) occur, the Discharger shall conduct accelerated monitoring. Accelerated monitoring shall consist of monthly monitoring. If data from accelerated monitoring tests are found to be in compliance with the chronic toxicity effluent limitations, then routine monitoring shall be resumed. If accelerated monitoring tests continue to exceed chronic toxicity limitation(s) (i.e., any two consecutive accelerated monitoring tests > 5 TUC), then the Discharger shall initiate a chronic toxicity reduction evaluation in accordance with Section V.C of the attached MRP (Attachment E).

#### **Discharge Point 002**

- e. The discharge of storm water shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location M-002 as described in the attached MRP (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil & Grease	mg/L		15		
pH <sup>4</sup>	Standard Units			6.5	8.5

## **2. Interim Effluent Limitations**

#### **Discharge Point 001**

During the period beginning July 1, 2006, and ending on April 28, 2010, for cyanide, the discharge of combined industrial process wastewater, cooling water, and storm water shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP (Attachment E). These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in Provision VI.C.4., Compliance Schedules, of this Order.

Parameter	Units	Maximum Daily
Cyanide	µg/L	22.0
Chlorodibromomethane	µg/L	2.0
Dichlorobromomethane	µg/L	2.0

### 3. Intake Water Credit.

The Discharger has met the conditions specified in Section 1.4.4, Intake Water Credits, of the SIP as discussed in detail in the Fact Sheet (Attachment F). The Discharger qualifies to receive intake water credit for copper as an alternative to complying with the concentration-based effluent limitations specified in IV.A.1.a of this Order. This credit is to offset high levels of copper found in the intake water. Compliance with the concentration-based limitation for copper specified in IV.A.1.a of this Order shall be assessed as follows:

- Monitoring Requirements.** The Discharger shall obtain monitoring samples in the intake, at Monitoring Locations I-001 and I-002, and in the effluent, at Monitoring Location M-001, during the same 24-hour period, as required in the attached MRP (Attachment E).
- Copper Intake Concentration.** The Discharger shall use the weighted average of the monitoring samples' analytical results obtained from Monitoring Locations I-001 and I-002, as specified in Section IV.A.3.a of this Order, to determine the copper intake concentration. The weighted average shall be calculated as follows:

$$\text{Copper Intake Concentration} = (\text{Cu001} * \text{Q001} + \text{Cu002} * \text{Q002}) / \text{QTotal}$$

where:

- Cu001 = Cooper Concentration at Monitoring Location I-001
- Cu002 = Cooper Concentration at Monitoring Location I-002
- Q001 = Intake Flow at Monitoring Location I-001
- Q002 = Intake Flow at Monitoring Location I-002
- QTotal = Q001 + Q002

- Compliance Evaluation.** If the effluent monitoring results indicate that the copper concentration is equal to or less than the Copper Intake Concentration, then the concentration limitations specified in IV.A.1.a of this Order are not applicable, and therefore, the discharge is in compliance. Otherwise, the effluent must comply with the effluent limitations specified in IV.A.1.a of this Order.

### 4. pH

The pH of the discharge shall not exceed 8.5 nor be less than 6.5 standard units. If the Discharger employs continuous pH monitoring, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied:

- The total time during which the pH values are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month.
- No individual excursion from the required range of pH values shall exceed 60 minutes.

**B. Land Discharge Specifications – N/A**

**C. Reclamation Specifications – N/A**

**V. RECEIVING WATER LIMITATIONS**

**A. Surface Water Limitations**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in New York Slough:

1. The discharge shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam in concentrations that cause nuisance or adversely affect beneficial uses;
  - b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
  - c. Alterations of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and
  - e. Toxic or other deleterious substances to be present in concentrations or quantities, which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.
2. The discharges shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.
3. The discharges shall not cause the following limits to be exceeded in waters of the State at any one place within one foot of the water surface:
  - a. Dissolved Oxygen: 5.0 mg/L, minimum  
The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharges shall not cause further reduction in ambient dissolved oxygen concentrations.
  - b. Dissolved Sulfide: 0.1 mg/L, maximum
  - c. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH by more than 0.5 Standard Units.

- d. Un-ionized Ammonia: 0.025 mg/L as N, annual median; and  
0.16 mg/L as N, maximum.
  - e. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
4. The discharges shall not cause a violation of any particular water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

**B. Groundwater Limitations – N/A**

**VI. PROVISIONS**

**A. Standard Provisions**

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the *Standard Provisions and Reporting Requirements, August 1993* (Attachment H), including any amendments thereto. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the specifications of this Order shall apply.

**B. Monitoring and Reporting Program Requirements**

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. The MRP includes monitoring at M-001 and M-002 for conventional, non-conventional, and toxic pollutants.

**C. Special Provisions**

1. **Reopener Provisions.** The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances:
  - a. If present or future investigations demonstrate that the discharge(s) governed by this Order will, or cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters.
  - b. As new or revised WQOs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs.

- c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified.
- d. An administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge; and
- e. as authorized by law.

The Discharger may request permit modification based on b, c, d, and e above. The Discharger shall include in any such request an antidegradation and antibacksliding analysis.

## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

### a. Effluent Monitoring.

The Discharger shall continue its effort to monitor and evaluate the discharge from Outfall M-001 for all 126 priority pollutants in the CTR as indicated in the sampling plan. The Discharger shall conduct monitoring as specified in the MRP in Attachment E of this Order effective July 1, 2006.

This information shall be included with the annual report required by this Order in Regional Water Board's Standard Provisions and Reporting Requirements, Attachment H. The report shall summarize the data collected to date and describe future monitoring to take place. A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior to the permit expiration date. Reporting requirements under this section may be satisfied by: (a) monthly reporting using the electronic reporting system (ERS), and (b) submittal of a complete application for permit reissuance no later than 180 days prior to the permit expiration date.

### b. Ambient Background Receiving Water Monitoring.

The Discharger shall continue to collect or participate in collecting background ambient receiving water data with other dischargers and/or through the Regional Monitoring Program. This information is required to perform RPAs and to calculate effluent limitations. To fulfill this requirement, the Discharger shall submit (or cause to have submitted on its behalf) data sufficient to characterize the concentration of each toxic pollutant listed in the CTR in the ambient receiving water. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the ambient receiving water at a point after the discharge has mixed with the receiving waters.

The sampling frequency and sampling station locations shall be specified in the sampling plan. The frequency of the monitoring shall consider the seasonal variability of the receiving water.

### c. Optional Mass Offset.

The Discharger may submit to the Regional Water Board for approval a mass offset plan to reduce 303(d) listed pollutants to the same watershed or drainage basin. The Regional Water Board may modify this Order to allow an approved mass offset program.

**d. Thermal Plume Monitoring**

To determine whether the temperature of the discharge (at Discharge Point 001) is protective of beneficial uses, the Discharger shall:

<u>Task</u>	<u>Due Date</u>
Propose a Study Plan and an implementation schedule	November 1, 2006
Conduct Study in accordance with the study plan that incorporates any and all comments from the Executive Officer	February 1, 2007
Submit Final Report	In accordance with the Study Plan implementation schedule, but no later than February 1, 2009.

In submitting the proposed study, the Discharger shall also send copies to the California Department of Fish & Game, and National Oceanic and Atmospheric Administration – National Marine Fisheries Service. This study proposal is subject to the written approval of the Executive Officer.

**3. Best Management Practices and Pollution Prevention**

**a. Pollutant Minimization Program.**

- (1) The Discharger shall continue to implement and improve, in a manner acceptable to the Executive Officer, its existing Pollution Prevention Program for cyanide, chlorodibromomethane and dichlorobromomethane in order to reduce pollutant loadings to the treatment plant and therefore to the receiving waters. The Discharger shall also implement any applicable additional pollutant minimization measures described in the Basin Plan implementation requirements associated with the Cyanide SSO if and when the cyanide SSO becomes effective and the alternate cyanide limit takes effect.
- (2) The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than August 30<sup>th</sup> of each year. Annual reports shall cover July through June of the preceding year. Annual report shall include at least the following information:
  - (a) *A brief description of its treatment facilities and treatment processes.*
  - (b) *A discussion of the current pollutants of concern.* Periodically, the Discharger shall analyze its own situation to determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.
  - (c) *Identification of sources for the pollutants of concern.* This discussion shall include how the Discharger intends to estimate and identify sources of the pollutants. The Discharger shall also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.
  - (d) *Identification of tasks to reduce the sources of the pollutants of concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement tasks itself or participate in group, regional, or national tasks that will address its pollutants of concern. The

Discharger is strongly encouraged to participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time-line shall be included for the implementation of each task.

- (e) *Outreach to employees.* The Discharger shall inform employees about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants of concern into the treatment facilities. The Discharger may provide a forum for employees to provide input to the Program.
  - (f) *Discussion of criteria used to measure the program's and tasks' effectiveness.* The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in item 2)iii., 2)iv., and 2)v.
  - (g) *Documentation of efforts and progress.* This discussion shall detail all the Discharger's activities in the Pollution Minimization Program during the reporting year.
  - (h) *Evaluation of program's and tasks' effectiveness.* The Discharger shall use the criteria established in 2)vi. To evaluate the Program's and tasks' effectiveness.
  - (i) *Identification of Specific Tasks and Time Schedules for Future Efforts.* Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks to more effectively reduce the amount of pollutants to the treatment plant, and subsequently in its effluent.
- (3) According to Section 2.4.5 of the SIP, when there is evidence that a priority pollutant is present in the effluent above an effluent limitation and either:
- (a) A sample result is reported as detected, but not quantified (less than the Minimum Level)(ML) and the effluent limitation is less than the reported ML; or
  - (b) A sample result is reported as not detected (less than the Method Detection Limit)(MDL) and the effluent limitation is less than the MDL;
  - (c) The Discharger shall expand its existing Pollution Minimization Program to include the reportable priority pollutant. A priority pollutant becomes a reportable priority pollutant (1) when there is evidence that it is present in the effluent above an effluent limitation and either 3)i., or 3)ii. If triggered or (2) if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.
- (4) If triggered by the reasons in 3) above and notified by the Executive Officer, the Discharger's Pollution Minimization Program shall, within 6 months, also include the following:
- (a) An annual review and semiannual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data.
  - (b) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer when it is demonstrated that influent monitoring is unlikely to produce useful analytical data.

- (c) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation.
- (d) Development of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy.
- (e) An annual status report that shall be sent to the Regional Water Board including the following:
  - i. All Pollution Minimization Program monitoring results for the previous year
  - ii. A list of potential sources of the reportable priority pollutant(s)
  - iii. A summary of all actions undertaken pursuant to the control strategy
  - iv. A description of actions to be taken in the following year.
- (5) To the extent that the requirements of the Pollution Prevention Program and the Pollutant Minimization Program overlap, the Discharger is allowed to continue, modify, or expand its Pollution Prevention Program to satisfy the Pollutant Minimization Program requirements.
- (6) These Pollution Prevention/Pollutant Minimization Program requirements are not intended to fulfill the requirements in the Clean Water Enforcement and Pollution Prevention Act of 1999 (Senate Bill 709).

**b. Storm Water Pollution Prevention Plan.**

The Discharger shall update and submit an updated Storm Water Pollution Prevention Plan (SWPPP) acceptable to the Executive Officer by September 1<sup>st</sup> of each year. If the Discharger determines that it does not need to update its SWPPP, it shall submit a letter to the Executive Officer that indicates no revisions are necessary and the last year it updated its SWPPP. The Discharger shall implement the SWPPP and the SWPPP shall comply with the requirements contained in *Standard Provisions and Reporting Requirements, August 1993* (Attachment H), of this Order.

**4. Compliance Schedules**

Until final Waste Load Allocations (WLAs) that are derived from Total Maximum Daily Loads (TMDLs) and Site Specific Objectives (SSOs) are adopted, the SIP and the Basin Plan authorize a compliance schedule in the permit, when final WQBELs may be affected by those TMDLs and SSOs, and when existing discharger cannot immediately comply with a new and more stringent effluent limitation. To qualify for a compliance schedule, both the SIP and the Basin Plan require that the Discharger demonstrate that it is infeasible to achieve immediate compliance with the new limit. As further described in detail in the Fact Sheet (Attachment F), the Discharger by letter dated February 7, 2006, demonstrated that it is infeasible to achieve compliance for certain pollutants. The following compliance schedules for applicable interim limits are established based on Section 2.2 of the SIP for limits derived from CTR WQC or based on the Basin Plan for limits derived from the Basin Plan WQOs.



Constituent	Reference for applicable standard	Maximum compliance schedule allowed	Compliance date and Basis
Cyanide	NTR	10 years	<b>April 28, 2010</b> (10 years from effective date of SIP). Basis is the Basin Plan
Chlorodibromomethane, and Dichlorobromomethane	CTR	5 years	<b>5-yr, but no later than May 18, 2010</b> (this is 10 years from effective date of CTR/SIP). Basis is the CTR and SIP.

**5. Construction, Operation and Maintenance Specifications – N/A**

**6. Special Provisions for Municipal Facilities (POTWs Only) –N/A**

**7. Other Special Provisions**

**a. Contingency Plan Update.**

- (1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (Attachment H), and as prudent in accordance with current industrial facility emergency planning. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the CWC.
- (2) The Discharger shall regularly review, and update as necessary, the Contingency Plan in order for the plan to remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.
- (3) The Discharger shall provide the Executive Officer, upon his or her request, a report describing the current status of its Contingency Plan review and update. The Discharger shall also include, in each Annual Self-Monitoring Report, a description or summary of review and evaluation procedures, and applicable changes to its Contingency Plan.

**VII. COMPLIANCE DETERMINATION**

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

**A. Average Monthly Effluent Limitation (AMEL).**

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

**B. Average Weekly Effluent Limitation (AWEL) – N/A.**

**C. Maximum Daily Effluent Limitation (MDEL).**

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

**D. Instantaneous Minimum Effluent Limitation.**

If the analytical result of a single grab sample is lower than the minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the minimum effluent limitation would result in two instances of non-compliance with the minimum effluent limitation).

**E. Instantaneous Maximum Effluent Limitation.**

If the analytical result of a single grab sample is higher than the maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the maximum effluent limitation would result in two instances of non-compliance with the maximum effluent limitation).

**F. Six-month Median Effluent Limitation – N/A.**

## ATTACHMENT A – DEFINITIONS

**Average Monthly Effluent Limitation (AMEL):** the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**Average Weekly Effluent Limitation (AWEL):** the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Daily Discharge:** Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

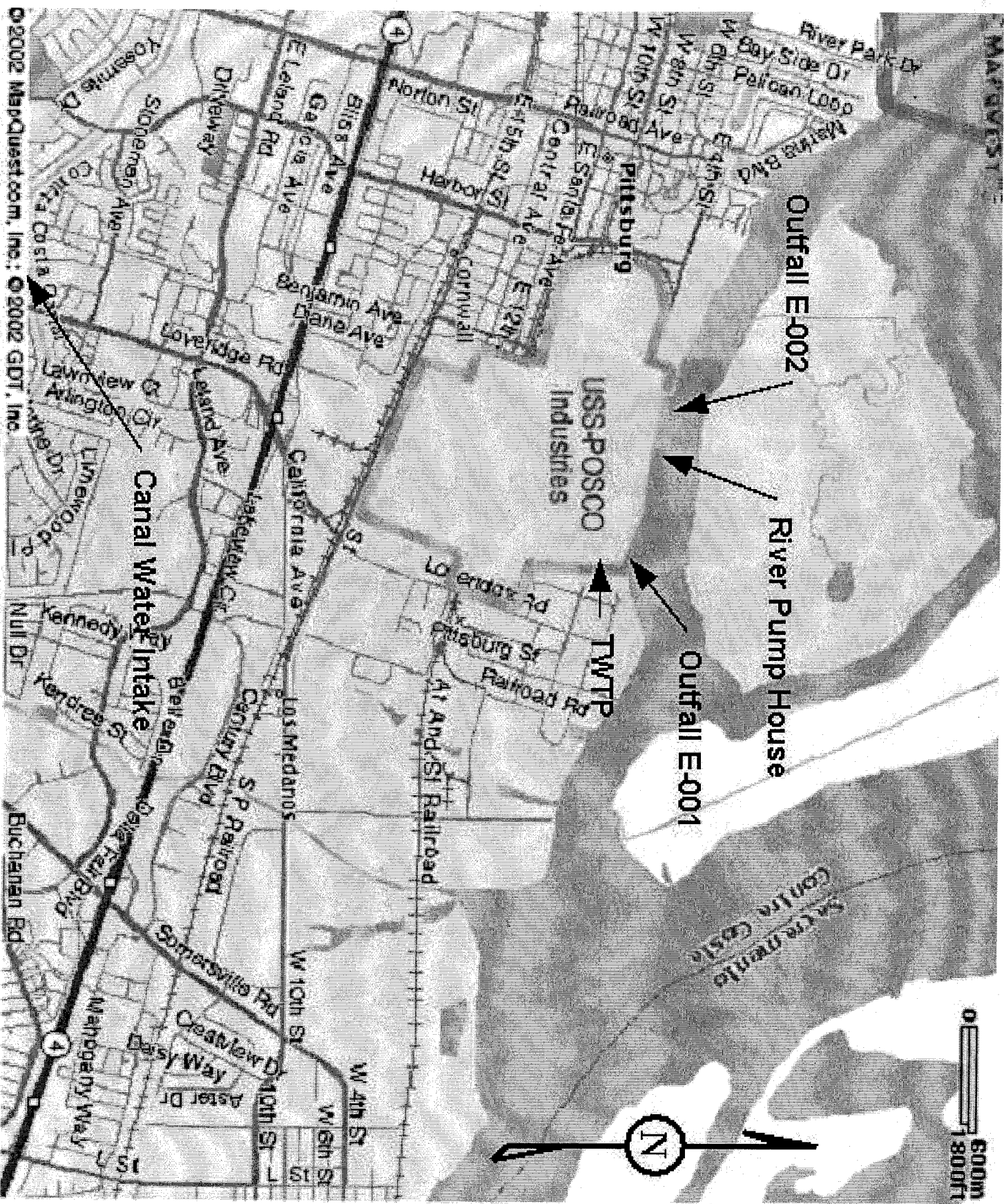
**Instantaneous Maximum Effluent Limitation:** the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the maximum limitation).

**Instantaneous Minimum Effluent Limitation:** the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the minimum limitation).

**Maximum Daily Effluent Limitation (MDEL):** the highest allowable daily discharge of a pollutant.

**Six-month Median Effluent Limitation:** the highest allowable moving median of all daily discharges for any 180-day period.

## **ATTACHMENT B – TOPOGRAPHIC MAP**

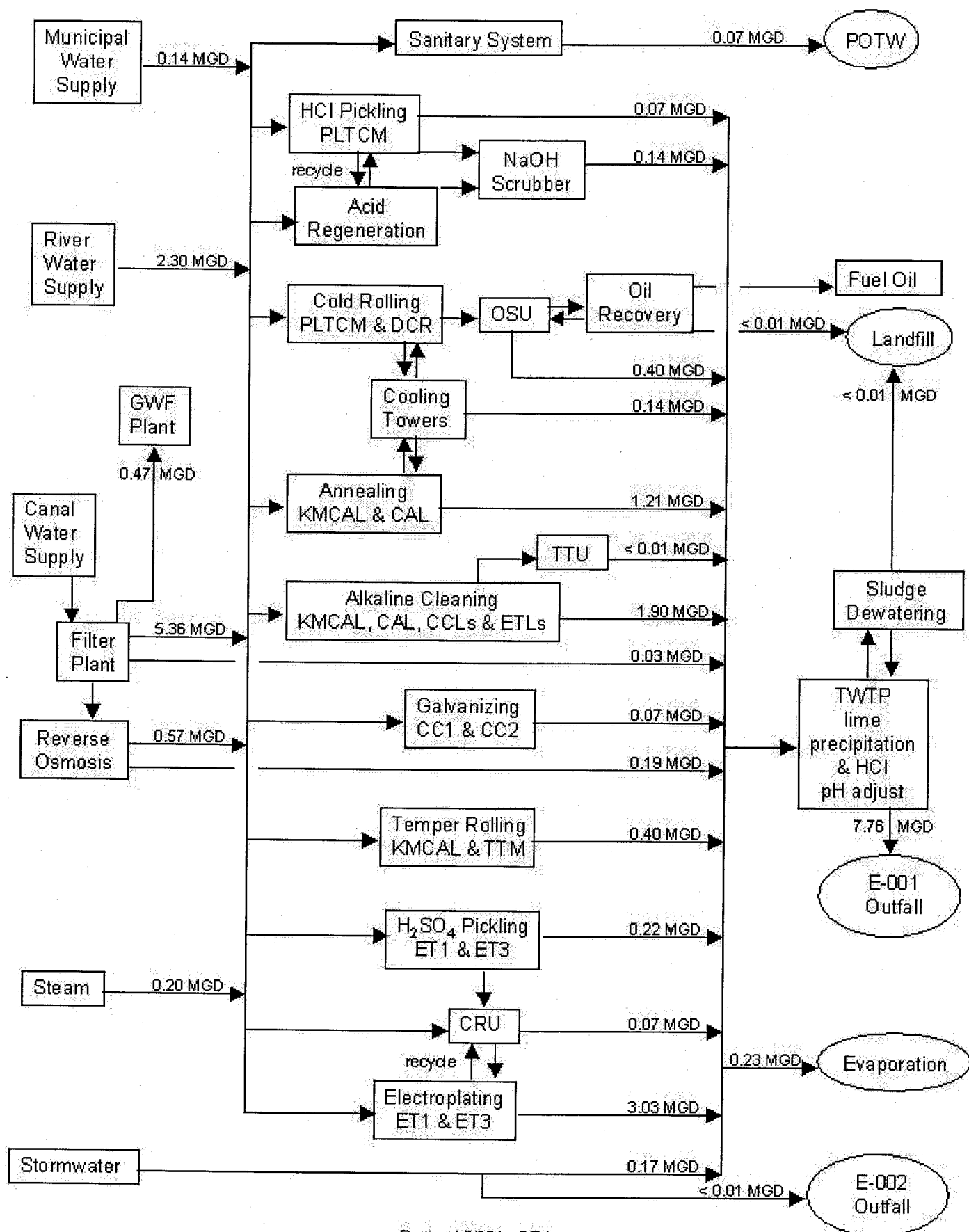


USS-POSCO Industries Site Location Map

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## **ATTACHMENT C – FLOW SCHEMATIC**

**Schematic of Water Flow  
USS-POSCO Industries  
CAD 009150194**



Revised 5/05 by DRA

## **ATTACHMENT D – FEDERAL STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [40 CFR §122.41(a)].
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [40 CFR §122.41(a)(1)].

#### **B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [40 CFR §122.41I].

#### **C. Duty to Mitigate**

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [40 CFR §122.41(d)].

#### **D. Proper Operation and Maintenance**

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [40 CFR §122.41(e)].

#### **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges [40 CFR §122.41(g)].
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [40 CFR §122.5I].



## F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [40 CFR §122.41(i)] [CWC 13383]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [40 CFR §122.41(i)(1)];
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [40 CFR §122.41(i)(2)];
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [40 CFR §122.41(i)(3)];
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [40 CFR §122.41(i)(4)].

## G. Bypass

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [40 CFR §122.41(m)(1)(i)].
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [40 CFR §122.41(m)(1)(ii)].
2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [40 CFR §122.41(m)(2)].
3. Prohibition of bypass – Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [40 CFR §122.41(m)(4)(i)]:
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 CFR §122.41(m)(4)(A)];

- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [40 CFR §122.41(m)(4)(B)]; and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [40 CFR §122.41(m)(4)I].
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [40 CFR §122.41(m)(4)(ii)].
5. Notice
- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [40 CFR §122.41(m)(3)(i)].
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions – Reporting V.E below [40 CFR §122.41(m)(3)(ii)].

## H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [40 CFR §122.41(n)(1)].

- 1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [40 CFR §122.41(n)(2)].
- 2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [40 CFR §122.41(n)(3)]:
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 CFR §122.41(n)(3)(i)];
  - b. The permitted facility was, at the time, being properly operated [40 CFR §122.41(n)(3)(i)];

- c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [40 CFR §122.41(n)(3)(iii)]; and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 CFR §122.41(n)(3)(iv)].
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [40 CFR §122.41(n)(4)].

## **II. STANDARD PROVISIONS – PERMIT ACTION**

### **A. General**

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [40 CFR §122.41(f)].

### **B. Duty to Reapply**

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [40 CFR §122.41(b)].

#### **i. Transfers**

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [40 CFR §122.41(l)(3)] [40 CFR §122.61].

## **III. STANDARD PROVISIONS – MONITORING**

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR §122.41(j)(1)].
- B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR §122.41(j)(4)] [40 CFR §122.44(i)(1)(iv)].

## **IV. STANDARD PROVISIONS – RECORDS**

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at

least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR §122.41(j)(2)].

**B. Records of monitoring information shall include:**

1. The date, exact place, and time of sampling or measurements [40 CFR §122.41(j)(3)(i)];
2. The individual(s) who performed the sampling or measurements [40 CFR §122.41(j)(3)(ii)];
3. The date(s) analyses were performed [40 CFR §122.41(j)(3)(iii)];
4. The individual(s) who performed the analyses [40 CFR §122.41(j)(3)(iv)];
5. The analytical techniques or methods used [40 CFR §122.41(j)(3)(v)]; and
6. The results of such analyses [40 CFR §122.41(j)(3)(vi)].

**C. Claims of confidentiality for the following information will be denied [40 CFR §122.7(b)]:**

1. The name and address of any permit applicant or Discharger [40 CFR §122.7(b)(1)]; and
2. Permit applications and attachments, permits and effluent data [40 CFR §122.7(b)(2)].

**V. STANDARD PROVISIONS – REPORTING**

**A. Duty to Provide Information**

The Discharger shall furnish to the Regional Water Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Water Board, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, SWRCB, or USEPA copies of records required to be kept by this Order [40 CFR §122.41(h)] [CWC 13267].

**B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, SWRCB, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [40 CFR §122.41(k)].
2. All permit applications shall be signed as follows:
  - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities,

provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [40 CFR §122.22(a)(1)];

- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [40 CFR §122.22(a)(2)]; or
  - c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [40 CFR §122.22(a)(3)].
3. All reports required by this Order and other information requested by the Regional Water Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in paragraph (2.) of this provision [40 CFR §122.22(b)(1)];
  - b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [40 CFR §122.22(b)(2)]; and
  - c. The written authorization is submitted to the Regional Water Board, SWRCB, or USEPA [40 CFR §122.22(b)(3)].
4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, SWRCB or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22I].
5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [40 CFR §122.22(d)].

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [40 CFR §122.41(l)(4)].
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or SWRCB for reporting results of monitoring of sludge use or disposal practices [40 CFR §122.41(l)(4)(i)].
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [40 CFR §122.41(l)(4)(ii)].
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [40 CFR §122.41(l)(4)(iii)].

### **D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [40 CFR §122.41(l)(5)].

### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR §122.41(l)(6)(i)].
2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 CFR §122.41(l)(6)(ii)]:

- a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(A)].
  - b. Any upset that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(B)].
  - c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [40 CFR §122.41(l)(6)(ii)I].
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [40 CFR §122.41(l)(6)(iii)].

#### **F. Planned Changes**

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [40 CFR §122.41(l)(1)]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [40 CFR §122.41(l)(1)(i)]; or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [40 CFR §122.41(l)(1)(ii)].
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [40 CFR §122.41(l)(1)(iii)].

#### **G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board or SWRCB of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [40 CFR §122.41(l)(2)].

#### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [40 CFR §122.41(l)(7)].

## ii. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [40 CFR §122.41(l)(8)].

## VI. STANDARD PROVISIONS – ENFORCEMENT

- A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [40 CFR §122.41(a)(2)] [CWC 13385 and 13387].
- B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [40 CFR §122.41(a)(3)].
- C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon



conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR §122.41(j)(5)].

- D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR §122.41(k)(2)].

## VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

### A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [40 CFR §122.42(a)]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” [40 CFR §122.42(a)(1)]:
  - a. 100 micrograms per liter ( $\mu\text{g/L}$ ) [40 CFR §122.42(a)(1)(i)];
  - b. 200  $\mu\text{g/L}$  for acrolein and acrylonitrile; 500  $\mu\text{g/L}$  for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter ( $\text{mg/L}$ ) for antimony [40 CFR §122.42(a)(1)(ii)];
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(1)(iii)]; or
  - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [40 CFR §122.42(a)(1)(iv)].
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” [40 CFR §122.42(a)(2)]:
  - a. 500 micrograms per liter ( $\mu\text{g/L}$ ) [40 CFR §122.42(a)(2)(i)];
  - b. 1 milligram per liter ( $\text{mg/L}$ ) for antimony [40 CFR §122.42(a)(2)(ii)];
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(2)(iii)]; or

- d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [40 CFR §122.42(a)(2)(iv)].

**B. Publicly-Owned Treatment Works (POTWs)**

All POTWs shall provide adequate notice to the Regional Water Board of the following [40 CFR §122.42(b)]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [40 CFR §122.42(b)(1)]; and
  - iii. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [40 CFR §122.42(b)(2)].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [40 CFR §122.42(b)(3)].

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## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the Federal and California regulations.

### **I. GENERAL MONITORING PROVISIONS**

- A.** The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the Self-Monitoring Program, Part A, adopted August 1993 (SMP, Attachment H of this Order). The MRP and SMP may be amended by the Executive Officer pursuant to USEPA regulations 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP prevails.
- B.** Sampling is required during the entire year when discharging. All analyses shall be conducted using current USEPA methods, or that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Board's Quality Assurance Program. The Regional Water Board will find the Discharger in violation of the limitation if the discharge concentration exceeds the effluent limitation and the Reporting Level for the analysis for that constituent.
- C.** Minimum Levels. For compliance monitoring, analyses shall be conducted using the lowest commercially available and reasonably achievable detection levels. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/L approximately equal to parts per billion (ppb).

According to the SIP, method-specific factors (MSFs) can be applied. In such cases, this additional factor must be applied in the computation of the Reporting Level. Application of such factors will alter the Reporting Level from the Minimum Level for the analysis. Dischargers are to instruct laboratories to establish calibration standards so that the Minimum Level value is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. The table below indicates the highest minimum level that the Discharger's laboratory must achieve for calibration purposes.

CTR #	Constituent	Minimum Levels for Types of Analytical Methods [a]				
		ICPMS	GC	GCMS	SPGFAA	Color
6.	Copper	0.5			2	
14.	Cyanide					5
18.	Acrylonitrile		2	2		
21.	Carbon Tetrachloride		0.5			
23.	Chlorodibromomethane		0.5			
27.	Dichlorobromomethane		0.5			
29.	1,2 -Dichloroethane		0.5			
30.	1,1-Dichloroethylene		0.5			
31.	1,2-Dichloropropane		0.5			
37.	1,1,2,2-Tetrachloroethane		0.5			
42.	1,1,2-Trichloroethane		0.5			
53.	Pentachlorophenol		1			
59.	Benzidine			5		
66.	Bis(2-Chloroethyl)Ether			1		
68.	Bis(2-Ethylhexyl)Phthalate			5		
78.	3,3-Dichlorobenzidine			5		
82.	2,4-Dinitrotoluene			5		
85.	1,2-Diphenylhydrazine			1		
88.	Hexachlorobenzene			1		
89.	Hexachlorobutadiene			1		
91.	Hexachloroethane			1		
93.	Isophorone			1		
96.	N-Nitrosodimethylamine			5		
97.	N-Nitrosodi-n-Propylamine			5		
98.	N-Nitrosodiphenylamine			1		
102.	Aldrin		0.005			
103.	alpha-BHC		0.01			
104.	beta-BHC		0.005			
105.	gamma-BHC		0.02			
108.	4,4'-DDT		0.01			
109.	4,4'DDE		0.05			
110.	4,4'DDD		0.05			
111.	Dieldrin		0.01			
112.	alpha-Endosulfan		0.02			
113.	beta-Endosulfan		0.01			
115.	Endrin		0.01			
117.	Heptachlor		0.01			
118.	Heptachlor Epoxide		0.01			
126.	Toxaphene		0.5			

[a] Laboratory techniques are defined as follows:

ICPMS = Inductively Coupled Plasma/Mass Spectrometry;  
GC = Gas Chromatography;  
GCMS = Gas Chromatography/Mass Spectrometry;  
SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption; and  
Color = Colorimetric

## II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	M-001	At any point in the outfall from USS-POSCO's treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present.
002	M-002	At any point in the outfall between the point of discharge and at which all waste tributary to that outfall is present.
--	R-001	At a point in New York Slough, located within 20 feet of shore, 100 feet easterly of 001.
--	R-002	At a point in New York Slough, located within 20 feet of shore, 100 feet westerly of 001.
--	R-003	At a point in New York Slough, located 100 feet northerly of 001.
--	R-004	At a point in New York Slough, Located 300 feet northerly of 001.
Rainfall	R-1	The nearest official National Weather Service rainfall station or other station acceptable to the Executive Officer.
Contra Costa Canal	I-001	At any point in the intake line to the Facility, approximately 200 yards west of Loveridge Road, prior to any alteration, or process use in the Facility.
San Joaquin River	I-002	At any point after the intake pump, located approximately 1000 feet west of the Facility's dock, prior to any alteration, or process use in the Facility.

## III. INFLUENT MONITORING REQUIREMENTS

### A. Monitoring Locations – I-001 and I-002

The Discharger shall monitor Contra Costa Canal and San Joaquin River intake waters at Monitoring Locations I-001 and I-002 as follows:

Parameter	Units <sup>[1]</sup>	Sample Type <sup>[2]</sup>	Minimum Sampling Frequency	Required Analytical Test Methods
Flow Rate	MGD	Continuous	Daily	
Copper	µg/L	C-24	Monthly	EPA 200.9

[1] Unit Abbreviations:

MGD = million gallons per day  
µg/L = micrograms per liter

[2] Sample Type Abbreviations:

Continuous = Measured continuously, and recorded and reported daily  
C-24 = 24-hour composite

#### IV. EFFLUENT MONITORING REQUIREMENTS

##### A. Monitoring Location – M-001

The Discharger shall monitor combined industrial process wastewater, cooling water, and storm water at M-001 as follows:

Parameter	Units <sup>[1]</sup>	Sample Type <sup>[2]</sup>	Minimum Sampling Frequency	Required Analytical Test Methods <sup>[8]</sup>
Flow Rate	MGD	Continuous	Daily	
pH	Standard Units	Continuous	Daily	
Temperature	°F	Continuous	Daily	
Total Suspended Solids	mg/L & lbs/day	C-24	Monthly	SM 2540 D
Settleable Matter	ml/l/hr	Grab <sup>[4]</sup>	Monthly	SM 2540 F
Oil & Grease <sup>[3]</sup>	mg/L & lbs/day	Grab <sup>[4]</sup>	Monthly	EPA 1664
Copper	µg/L	C-24	Monthly	EPA 200.9
Cyanide <sup>[5]</sup>	µg/L	Grab <sup>[4]</sup>	Monthly	SM 4500-CN C or I
Mercury	µg/L	Grab <sup>[4]</sup>	Quarterly	[6]
Selenium	µg/L	C-24	Quarterly	SM 3114B or C
Lead	µg/L & lbs/day	C-24	Monthly	EPA 200.9
Zinc	µg/L & lbs/day	C-24	Monthly	EPA 200 or 289
Total Chromium	µg/L & lbs/day	C-24	Monthly	SM 3500
Total Nickel	µg/L & lbs/day	C-24	Monthly	EPA 249.2
Total Silver	µg/L & lbs/day	C-24	Monthly	EPA 272.2
Naphthalene	µg/L & lbs/day	C-24	Monthly	EPA 625
Chlorodibromomethane	µg/L	Grab <sup>[4]</sup>	Twice/year (1/wet, 1/dry season)	EPA 601
Dichlorobromomethane	µg/L	Grab <sup>[4]</sup>	Twice/year (1/wet, 1/dry season)	EPA 601
Tetrachloroethylene	µg/L & lbs/day	Grab <sup>[4]</sup>	Monthly	EPA 601
Acute Toxicity	Percent Survival	C-24	Every two weeks	
Chronic Toxicity	TU <sub>c</sub>	C-24	Quarterly	
2,3,7,8-TCDD and congeners <sup>[7]</sup>	pg/L	Grab <sup>[4]</sup>	Annually	EPA Method 1613
Tributyltin	µg/L	Grab <sup>[4]</sup>	Annually	Batelle N-0959-2606, or SM 6710 (online version only)
August 6, 2001 Letter, Table 1 Selected Constituents (except those listed above), metals.	µg/L	Grab <sup>[4]</sup>	Monthly	
August 6, 2001 Letter, Table 1 Selected Constituents (except those listed above), organics.	µg/L	Grab <sup>[4]</sup>	Annually	

[1] Unit Abbreviations:

MGD = million gallons per day  
°F = degree Fahrenheit  
lbs/day = pounds per day  
mg/L = milligrams per liter  
pg/L = picograms per liter  
µg/L = micrograms per liter  
TU<sub>c</sub> = chronic toxicity unit

[2] **Sample Type Abbreviations:**

Continuous = Measured continuously, and recorded and reported daily  
C-24 = 24-hour composite

[3] **Oil & Grease Monitoring:** Each Oil & Grease sample event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsing as soon as possible after use, and the solvent rinsing shall be added to the composite sample for extraction and analysis.

[4] **Grab Samples** shall be collected coincident with composite samples collected for the analysis of regulated parameters.

[5] **Cyanide:** Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

[6] **Mercury:** The Discharger shall use ultra-clean sampling (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as USEPA 245), if that alternate method has a Minimum Level of 2 ng/L (0.002 µg/L) or less.

[7] **2,3,7,8-TCDD and congeners.** Chlorinated Dibenzodioxins and Chlorinated Dibenzofurans shall be analyzed using the latest version of USEPA Method 1613; the analysis shall be capable of achieving one half the USEPA method 1613 Minimum Levels. Alternative methods of analysis must be approved by the Executive Officer. In addition to reporting results for each of the 17 congeners, the TCDD TEQ shall be calculated and reported using 1998 USEPA Toxicity Equivalent Factors for dioxin and furan congeners.

[8] The Discharger has the option of substituting another method for those listed in this table, but only if that method has a level of quantification below the applicable criterion or below the lowest ML listed in section I.C of this MRP. This alternate method must also be USEPA approved.

**B. Monitoring Location – M-002**

The Discharger shall monitor storm water at M-002 as follows:

Parameter	Units <sup>[1]</sup>	Sample Type	Minimum Sampling Frequency <sup>[2]</sup>	Required Analytical Test Method
Flow	mgd	--	Each occurrence	
duration	minutes	--	Each occurrence	
pH	Standard Units	Grab	Each occurrence	
Total Suspended Solids	mg/L	Grab	Each occurrence	
Oil & Grease	mg/L	Grab	Each occurrence	
Specific Conductance	µmhos/cm	Grab	Each occurrence	

[1] **Unit Abbreviations:**

mg/L = milligrams per liter  
µmhos/cm = micro-ohms per centimeter  
mgd = million gallons per day

[2] **Each occurrence.** Significant storm water discharges shall be monitored during at least one storm event per month. These are continuous discharges of storm water for a minimum of one hour, or an intermittent discharge of storm water for a minimum of three hours in a 12-hour period.

**V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Whole Effluent Acute Toxicity**

Compliance with whole acute toxicity requirements of this Order shall be achieved in accordance with the following:

1. Acute toxicity effluent limits shall be evaluated by measuring survival of test organisms exposed to 96-hour flow through bioassays;
2. Test organism shall be rainbow trout unless specified otherwise in writing by the Executive Officer; and



3. All bioassays shall be performed according to 40 CFR 136, currently the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms", 5<sup>th</sup> Edition. Exceptions may be granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

#### **B. Whole Effluent Chronic Toxicity**

1. The previous permit required the Discharger to perform toxicity testing on Red Abalone (*Haliotis rufescens*) for compliance determination. Compliance with this Order retains that requirement to perform critical life stage toxicity test(s) on Red Abalone (*Haliotis rufescens*).

The previous permit also required an effluent chronic toxicity screening as part of the Discharger's application for permit reissuance (The Screening Study). The Discharger is currently completing The Screening Study to identify the most sensitive species. Upon receipt of the Discharger's Screening Study, the Executive Officer shall have 45 days to review and approve the most sensitive species to be used in chronic toxicity testing. If the Executive Officer does not comment on the results of The Screening Study, the proposed species found in the screening program is deemed approved. Subsequently, the chronic toxicity effluent limits of this Order shall be evaluated by measuring the critical life stage toxicity test(s) and the newly identified most sensitive test species.

2. The Discharger shall also conduct screening phase compliance monitoring under either of the following conditions:
  - a. Subsequent to any significant change in the nature of the treatment plant effluent through changes in sources or treatment, except those changes resulting from reduction in pollutant concentrations attributable to pretreatment, source control, and waste minimization efforts; or,
  - b. Prior to permit reissuance.

Chronic Toxicity Monitoring Screening Phase Requirements for screening phase testing, Critical Life Stage Toxicity Tests, and definitions of terms used in the chronic toxicity monitoring are identified in Attachment G of this Order.

#### **C. Toxicity Reduction Evaluation**

The toxicity reduction evaluation (TRE) shall be conducted in accordance with the following:

1. The Discharger shall prepare and submit to the Regional Water Board for Executive Officer approval a TRE workplan. An initial generic workplan shall be submitted within 120 days of the date of adoption of this Order. The workplan shall be reviewed and updated as necessary in order to remain current and applicable to the discharge and discharge facilities.
2. The TRE shall be initiated within 30 days of the date of completion of the accelerated monitoring test observed to exceed either evaluation parameter.
3. The TRE shall be conducted in accordance with an approved workplan.

4. The TRE needs to be specific to the discharge and Discharger facility, and may be in accordance with current technical guidance and reference materials including USEPA guidance materials. The TRE should be conducted as a tiered evaluation process, such as summarized below:
  - a. Tier 1 consists of basic data collection (routine and accelerated monitoring).
  - b. Tier 2 consists of evaluation of optimization of the treatment process including operation practices, and in-plant process chemicals.
  - c. Tier 3 consists of a toxicity identification evaluation (TIE).
  - d. Tier 4 consists of an evaluation of options for additional effluent treatment processes.
  - e. Tier 5 consists of an evaluation of options for modifications of in-plant treatment processes.
  - f. Tier 6 consists of implementation of selected toxicity control measures, as well as follow-up monitoring and confirmation of implementation success.
5. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity.
6. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies should be employed.
7. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity evaluation parameters.
8. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of compliance with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.
9. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of the causes and reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

#### **VI. LAND DISCHARGE MONITORING REQUIREMENTS – N/A**

#### **VII. RECLAMATION MONITORING REQUIREMENTS – N/A**

## VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

### A. Monitoring Locations – R-001, R-002, R-003, and R-004

1. The Discharger shall monitor New York Slough at R-001, R-002, R-003, and R-004 as follows:

Parameter	Units <sup>[1]</sup>	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard Units	Grab	Annually	
Temperature	°F	Grab	Annually	
Dissolved Oxygen	mg/L	Grab	Annually	
Sulfides <sup>[2]</sup>	mg/L	Grab	Annually	
Standard Observations <sup>[3]</sup>		Visual	Annually	

[1] Unit Abbreviations:

°F = degree Fahrenheit  
mg/L = milligrams per liter

- [2] Receiving water analysis for sulfides shall be run when dissolved oxygen is less than 5.0 mg/L.

[3] Standard Observations include:

- a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter), presence or absence, source, and size of affected area.
- b. Discoloration and turbidity: description of color, source, and size of affected area.
- c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
- d. Hydrographic condition:
  - 1) Time and height of corrected high and low tides (corrected to nearest NOAA location for the sampling date and time of sample and collection).
  - 2) Depth of water columns and sampling depths.
- e. Weather conditions:
  - 1) Air temperatures.
  - 2) Wind-direction and estimated velocity.
  - 3) Total precipitation during the previous five days and on the day of observation.

## IX. OTHER MONITORING REQUIREMENTS

### A. Regional Monitoring Program

The Discharger has agreed to continue to participate in the Regional Monitoring Program, which involves collection of data on pollutants and toxicity in water, sediment and biota of the estuary. The Discharger's participation and support of the RMP is used in consideration of in the level of receiving water monitoring required by this Order.

## X. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Standard Provisions (Attachment D and G) related to monitoring, reporting, and recordkeeping.

### B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given,

the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due 30 days after the end of each calendar month.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Effective date of permit	All	First day of second calendar month following month of sampling
Every two weeks	Effective date of permit	Sunday through Saturday	First day of second calendar month following month of sampling
Once / month	Effective date of permit	1 <sup>st</sup> day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Once / quarter	Effective date of permit	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Once / semi-annual period	Effective date of permit	January 1 through June 30 July 1 through December 31	August 1 February 1
Once / year	Effective date of permit	January 1 through December 31	February 1

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

- d. The Discharger shall instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. The Discharger shall not use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.
6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D and H), to the address listed below:

Executive Officer  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
ATTN: NPDES Permit Division

8. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any discrepancies between the ERS requirements and the "hard copy" requirements listed in the MRP, then the approved ERS requirements supercede.

### **C. Discharge Monitoring Reports (DMRs)**

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board  
Discharge Monitoring Report Processing Center  
Post Office Box 671  
Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

**D. Other Reports**

1. **Annual Reports.** By February 1<sup>st</sup> of each year, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the items described in Standard Provisions and Reporting Requirements, and SMP Part A, August 1993 (Attachment H).

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## ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

WDID	2 071059001
Discharger	USS POSCO Industries
Name of Facility	Pittsburg Plant
Facility Address	900 Loveridge Road
	Pittsburg, CA 94565
	Contra Costa
Facility Contact, Title and Phone	David Allen, Sr. Environmental Engineer, (925) 439-6290
Authorized Person to Sign and Submit Reports	David Allen, Sr. Environmental Engineer, (925) 439-6290
Mailing Address	P. O. Box 471, MS#67, Pittsburg, CA 94565
Billing Address	SAME
Type of Facility	Industrial with SIC code 3312
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Reclamation Requirements	None
Facility Permitted Flow	Average Flow of 11.1 million gallons per day
Facility Design Flow	28 million gallons per day
Watershed	Suisun Basin
Receiving Water	New York Slough, a water body of the Sacramento-San Joaquin Delta
Receiving Water Type	Surface Water

- A. USS-POSCO Industries (hereinafter Discharger) owns the property at 900 Loveridge Road in the City of Pittsburg on which the Facility is located.
- B. The Facility discharges wastewater to New York Slough, a water of the United States and a contiguous water body of the Sacramento-San Joaquin Delta, and is currently regulated by Order 00-130 which was adopted on November 29, 2000, and expired on November 29, 2005. The terms of the previous permit automatically continued in effect after the permit expiration date.
- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on May 31, 2005.

### II. FACILITY DESCRIPTION

The Discharger owns and operates a steel finishing plant. The Facility is located on 490-acres in Contra Costa County. The Facility receives and processes coils of hot rolled steel, producing as principal products: cold-rolled, galvanized, and tin and chromium coated steel coils. The Facility “finishes” steel, but does not “manufacture” steel from raw materials. Processes used in the

finishing are hydrochloric and sulfuric acid pickling, cold rolling, cleaning, annealing, hot dip galvanizing, and electrolytic tin and chromium plating.

#### A. Description of Wastewater Treatment

The Facility's collection system transports all processed wastewater, cooling waters, and storm water runoff to the wastewater treatment plant. In addition, the wastewater treatment facility may receive a maximum of 5 million gallons per year of waste from impoundments and monitoring well sampling. Treatment of this combined wastewater consists of a pH adjustment, oil skimming, lime flocculation, clarification, and a final pH adjustment.

#### B. Discharge Points and Receiving Waters

1. **Discharge Point 001.** The Facility discharges an average of 11.1 million gallons per day of treated wastewater from a surface outfall located at latitude 38° 01' 48" and longitude 121° 51' 32" to New York Slough.

2. **Discharge Point 002.** All storm water is diverted to the Facility's wastewater treatment plant, except during occurrences when it cannot handle the volume. During these occurrences, if the storm water sump reaches its capacity, the storm water overflows a weir and is discharged from Discharge Point 002, located at latitude 38° 01' 51" and longitude 121° 51' 58". Discharges from Discharge Point 002 usually only occurs during rainfall intensities greater than a 2-year, 24-hour storm events. During the years 2001 through 2005, thirteen discharge events occurred from Discharge Point 002, and the following table presents the quality of the storm water runoff.

Parameter	Date	Monthly	Daily Maximum
Flow (million gallons per minute)	12/2005	0.15	0.12
Duration (minutes)	12/2005	320	240
pH maximum (standard units)	1/8/2005	--	8.34
pH minimum (standard units)	10/26/04		6.96
Oil and Grease (mg/L)	10/26/04		1.8

a. **Regulations.** Federal regulations for storm water discharges were promulgated by the USEPA on November 19, 1990. The regulations [40 CFR Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges. The Discharger diverts most storm water from the Facility to its wastewater treatment facility. During 2-year, 24-hour storm events, volumes of storm water that the treatment facility cannot manage is discharged through Discharge Point 002.

b. **Exemption from Coverage under Statewide Storm Water General Permit.** The State Water Resources Control Board's (the State Board's) statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001- the General Permit) was adopted on November 19, 1991, amended on September 17, 1992, and reissued on April 17, 1997. The Discharger is not required to be covered under the General Permit because all storm water discharges are covered

under this Order. The Discharger has implemented a storm water pollution prevention plan according to Provision VI.C.3 of this Order.

### C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. **Discharge Point 001.** Effluent limitations contained in the previous permit for discharges from E-001 (now Discharge Point 001) and representative monitoring data from the term of the previous permit are as follows:

Parameter (units)	Effluent Limitation		Monitoring Data (2001 – 2005)	
	Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Total Suspended Solids (kg/day)	919	2,015	1262.8	1389.2
Settleable Solids (ml/l/hr)	0.1	0.2	0.05	0.05
Oil & Grease (kg/day)	432	1,073	898.5	898.5
Phenolic Compounds (lb/day)	18	37	12.53	12.53
Total Chromium (lb/day)	33	55	9.64	11.72
Lead (lb/day)	11.3	23.4	<0.09	<0.09
Lead ((µg/L)	1.6	3.2	0.62	0.62
Nickel (lb/day)	54.2	75.9	0.45	0.4
Nickel (µg/L)		7.1		7.7
Zinc (lb/day)	31.1	61	1.23	4.18
Zinc (µg/L)	18	58	18	63
Iron (dissolved) (lb/day)	6.6	19.8	15.33	21.5
Naphthalene (lb/day)		0.62		0.112
Tetrachloroethylene (lb/day)		0.93		<0.12
Chromium (VI) (µg/L)	5.5	11	4.3	4.3
Copper (µg/L)		4.9		7.6
Mercury (µg/L)		0.68		0.013

2. **Discharge Point 002.** This Order retains the effluent limitations contained in the previous permit for discharges from E-002 (now Discharge Point 002). Representative monitoring data from the term of the previous permit are as follows:

Parameter (units)	Effluent Limitation		Monitoring Data (2002 – 2005)	
	Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Oil & Grease (mg/L)		15	<1.8	<1.8
pH (standard units)		Range 6.5 – 8.5		Range 6.9 – 8.34

**D. Compliance Summary.** The following table summarizes the number of effluent limitation exceedances for Discharge Point 001 during the previous permit period. No exceedances occurred at Discharge Point 002.

Parameter	Number of Exceedances for the Year				
	2001	2002	2003	2004	2005
pH Maximum	1				1
Chronic Toxicity Median (% Survival)	2	4	2	2	1
Chronic Toxicity 90 <sup>th</sup> % (% Survival)	2	4	1	2	
Copper Daily Maximum					1
Nickel Daily Maximum		1			
Zinc Daily Maximum			1		

## **E. Planned Changes – N/A**

### **III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in this Order are based on the requirements and authorities described in this section.

#### **A. Legal Authorities**

1. This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.
2. NPDES Permit/USEPA concurrence are based on 40 CFR 123.
3. Order expiration and reapplication are based on 40 CFR 122.46(a).

#### **B. California Environmental Quality Act (CEQA)**

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.

#### **C. State and Federal Regulations, Policies, and Plans**

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Basin (Region 2) (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Regional Water Board amended the Basin Plan (Resolution No. R2-2004-0003) on January 21, 2004. The State Water Board and the Office of Administrative Law approved these amendments on July 22, 2004, and October 4, 2004, respectively. The USEPA gave final approval to the amendment on January, 5, 2005.

The Basin Plan states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for New York Slough, a contiguous water body of the Sacramento-San Joaquin Delta, but does identify present and potential uses for the Sacramento-San Joaquin Delta. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, beneficial uses applicable to New York Slough are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 002	Sacramento-San Joaquin Delta	Agricultural Supply (AGR), Municipal and Domestic Supply (MUN), Groundwater Recharge (GWR), Industrial Service Supply (IND), Industrial Process Supply (PROC), Ocean Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Fish Migration (MIGR), Preservation of Rare and Endangered Species (RARE), Water Contact Recreation (REC-1), Noncontact Water Recreation (REC-2), Fish Spawning (SPWN), Wildlife Habitat (WILD), and Navigation (NAV).

The Basin Plan (Table 4-1) contains a prohibition of discharge of any wastewater which has particular constituents of concern to beneficial uses (1) at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or (2) into any non-tidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof.

Exceptions will be considered by the Regional Water Board where a discharger meets the following requirements: (1) completion of a source identification study, (2) development and implementation of a source reduction plan, and (3) commitment of resources to fully implement the source control and reduction plan. In a report dated November 6, 1996, the Discharger demonstrated that it has met these requirements. Thus, in the previous permit, the Regional Water Board determined that an exception to the discharge prohibition is warranted for the Discharger's shallow water discharge to New York Slough. This Order retains the Regional Water Board's determination that the discharge prohibition does not apply to the Discharger's shallow water discharge.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

On November 16, 1976, the Regional Water Board granted the Discharger exemptions regarding the maximum temperature of discharge (Resolution No. 76-16). The State Water Board upheld the exemptions on December 20, 1979, (Resolution No. 79-108) concurring with the Regional Water Board and finding that the maximum discharge temperature of 93°F would not compromise the protection and propagation of a balance indigenous population of shellfish, fish, and wildlife.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.
4. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate

test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The State Water Board amended the SIP on February 24, 2005, and the amendments became effective on May 31, 2005. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires Dischargers to submit data sufficient to do so.

5. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the Federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the Federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.
6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous permit. As discussed in this Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and Federal regulations.
7. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement Federal and State requirements. This MRP is provided in Attachment E. The MRP may be amended by the Executive Officer pursuant to USEPA regulation 40 CFR 122.62, 122.63, and 124.5.

#### **D. Impaired Water Bodies on CWA 303(d) List**

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State (hereinafter referred to as the 303(d) list), prepared pursuant to provisions of Section 303(d) of the Federal CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Sacramento-San Joaquin Delta is listed as an impaired waterbody. The pollutants impairing the Sacramento-San Joaquin Delta include chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, nickel, total PCBs, PCBs (dioxin like), and selenium. Copper, which was previously identified as impairing Sacramento-San Joaquin Delta, was not included as an impairing pollutant in the 303(d) list and has been placed on the new Monitoring List. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads and associated waste load allocations.

1. **Total Maximum Daily Loads.** The Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list in Sacramento-San Joaquin Delta

within the next ten years. Future review of the 303(d)-list for Sacramento-San Joaquin Delta may result in revision of the schedules, provide schedules for other pollutants, or both.

2. **Waste Load Allocations.** The TMDLs will establish waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, and will result in achieving the water quality standards for the waterbodies. The final effluent limitations for this Discharger will be based on WLAs that are derived from the TMDLs.
3. **Implementation Strategy.** The Regional Water Board's strategy to collect water quality data and to develop TMDLs is summarized below:
  - a. **Data Collection.** The Regional Water Board has given the dischargers the option to collectively assist in developing and implementing analytical techniques capable of detecting 303(d)-listed pollutants to at least their respective levels of concern or WQOs/WQC. This collective effort may include development of sample concentration techniques for approval by the USEPA. The Regional Water Board will require dischargers to characterize the pollutant loads from their facilities into the water-quality limited waterbodies. The results will be used in the development of TMDLs, and may be used to update or revise the 303(d) list or change the WQOs/WQC for the impaired waterbodies including Sacramento-San Joaquin Delta.
  - b. **Funding Mechanism.** The Regional Water Board has received, and anticipates continuing to receive, resources from Federal and State agencies for TMDL development. To ensure timely development of TMDLs, the Regional Water Board intends to supplement these resources by allocating development costs among dischargers through the RMP or other appropriate funding mechanisms.

#### **E. Other Plans, Policies and Regulations – N/A**

#### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established. Three options exist to protect water quality: 1) 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

This Order contains restrictions on individual pollutants that are no more stringent than required by the Federal Clean Water Act. Individual pollutant restrictions consist of water quality-based effluent limitations that have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been

approved pursuant to Federal law and are the applicable Federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the California Toxics Rule, the California Toxics Rule is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA prior to May 1, 2001, or Basin Plan provisions approved by USEPA on May 29, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to 40 CFR 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than the applicable water quality standards for purposes of the Clean Water Act.

Several specific factors affecting the development of limitations and requirements in this Order are discussed as follows:

**A. Discharge Prohibitions**

1. **Prohibition III.A (No discharge other than as described in this Order).** This prohibition is the same as on the previous permit, and is based on the CWC 13260 that requires filing of a report of waste discharge (ROWD) before a permit to discharge can be granted. The Discharger submitted a ROWD, dated June 1, 2005, for permission to discharge as specified in this permit, thus any discharges other than as described in this Order are prohibited.
2. **Prohibition III.B (No bypass or overflow):** This prohibition is based on best professional judgment (BPJ).

**B. Technology-Based Effluent Limitations for Discharge Point 001 and Discharge Point 002.**

The technology-based effluent limitations consists of restrictions on TSS, oil and grease, lead, zinc, total chromium, total nickel, total silver, naphthalene, tetrachloroethylene, and settleable matter. Restrictions on these pollutants are specified in Federal regulations, and this permit's technology-based pollutant restrictions are no more stringent than required by the Clean Water Act.

1. **Scope and Authority.** The CWA requires USEPA to develop effluent limitation guidelines and pretreatment standards (ELGs) representing application of Best Available Technology Economically Achievable (BAT), Best Practicable Control Technology (BPT), and/or Best Conventional Pollutant Control technology (BCT). The Facility is classified as subcategory "steel finishing" of Iron and Steel Manufacturing facilities as defined by the USEPA in 40 CFR § 420. In addition, the Discharger is also classified as subcategory "metal finishing" as defined by 40 CFR § 433. Therefore, the USEPA ELGs for the Iron and Steel Manufacturing Point Sources (40 CFR § 420 Subcategories I: Acid pickling, J: Cold forming, K: Alkaline cleaning, and L: Hot coating) and for Metal Finishing Point Source (40 CFR § 433, Subcategory A: Electroplating) based on BAT, BPT, and BCT,



whichever are more stringent, are applicable to the Discharger.

## 2. Applicable Technology-Based Effluent Limitations.

- a. Discharge Point 001.** This section contains production-based mass emission limits for the following constituents: total suspended solids (TSS), oil & grease, lead, zinc, naphthalene, and tetrachloroethylene based on 40 CFR § 420 Subcategories I, J, K, and L; and also TSS, oil & grease, total lead, total chromium, total nickel, and total silver based on 40 CFR § 433, Subcategory A. The application of these guidelines and standards is based on production rates at the Facility. In calculating currently applicable effluent limitations, Regional Water Board staff has used the average daily production rates based on the years 2000 through 2005. Attachment 1 of this Fact Sheet shows the methodology and data used to calculate the technology-based effluent limitations. The Facility's ability to comply with the following technology-based effluent limits has been demonstrated by existing plant performance.

Parameter (lbs/day)	Technology-based Effluent Limitations	
	Average Monthly	Maximum Daily
TSS	2365	5139
Oil and Grease	1025	2391
Lead	15.5	31.5
Zinc	5.6	16.9
Total Chromium	42.8	69.4
Total Nickel	59.6	99.6
Total Silver	6.0	10.8
Napthalene		0.68
Tetrachloroethylene		1.03
Settleable matter (ml/l/hr)	0.1	0.2

Settleable Matter. This effluent limitation is unchanged from the previous permit, and is based on the Basin Plan (Chapter 4, Table 4-2).

- b. Discharge Point 002.** This Order retains the technology-based effluent limitations contained in the previous permit for discharges from Discharge Point 002 for pH, and oil & grease. These technology-based effluent limitations are based on the Basin Plan, 40 CFR § 420.08, and BPJ.

Parameter	Technology-based Effluent Limitations		
	Instantaneous Minimum	Instantaneous Maximum	Maximum Daily
pH (Standard Units)	6.5	8.5	
Oil and Grease (mg/L)			15

- C. Water Quality-Based Effluent Limitations (WQBELs) for Discharge Point 001.** Water quality-based effluent limitations (WQBELs) have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to Federal law and are the applicable Federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the California Toxics Rule, the California Toxics Rule is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was

approved by USEPA prior to May 1, 2001, or Basin Plan provisions approved by USEPA on May 29, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically copper, cyanide, chlorodibromomethane and dichlorobromomethane) were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to 40 CFR 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than the applicable water quality standards for purposes of the Clean Water Act.

## 1. Scope and Authority

- a. As specified in 40 CFR §122.44(d)(1)(i), permits are required to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." ( Reasonable Potential) The process for determining Reasonable Potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or water quality criteria contained in the CTR and NTR.
- b. NPDES regulations and the SIP provide the basis to establish Maximum Daily Effluent Limitations (MDELs).
  - 1) **NPDES Regulations.** NPDES regulations at 40 CFR Part 122.45(d) state:  
"For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works."
  - 2) **SIP.** The SIP (page 8, Section 1.4) requires WQBELs be expressed as MDELs and average monthly effluent limitations (AMELs).
- c. MDELs are used in this Order to protect against acute water quality effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.

## 2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan, the CTR, and the NTR.

- a. **Basin Plan.** The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in freshwater, lead, mercury, nickel, silver, zinc, and cyanide (see also c., below). The narrative toxicity objective states in part "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that

produce other detrimental responses in aquatic organisms.” The bioaccumulation objective states in part “[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.” Effluent limitations and provisions contained in this Order are designed to implement these objectives, based on available information.

- b. CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries such as here, except that where the Basin Plan’s Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants, the Basin Plan’s numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).
- c. NTR.** The NTR established numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to, and including, Suisun Bay and the Sacramento-San Joaquin Delta. This includes the receiving water for this Discharger.
- d. Technical Support Document for Water Quality-Based Toxics Controls.** Where numeric objectives have not been established or updated in the Basin Plan, 40 CFR Part 122.44(d) specifies that WQBELs may be set based on USEPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQOs to fully protect designated beneficial uses. Regional Water Board staff used best professional judgment (BPJs) to determine the WQOs, WQCs, WQBELs, and calculations contained in this Order as defined by USEPA’s March 1991 Technical Support Document for Water Quality-Based Toxics Control (the TSD).
- e. Basin Plan Receiving Water Salinity Policy.** The Basin Plan states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable WQC. Freshwater criteria shall apply to discharges to waters with salinities equal to or less than one ppt at least 95 percent of the time. Saltwater criteria shall apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the criteria shall be the lower of the salt or freshwater criteria, (the latter calculated based on ambient hardness), for each substance.

  - 1) Salinity.** The receiving water for the subject discharge is New York Slough, which is a tidally influenced waterbody, with significant fresh water inflows during the wet seasons when Sacramento-San Joaquin Delta outflow is the highest (Jan-April). Regional Water Board staff evaluated salinity data for New York Slough, which was collected by Delta Diablo Sanitation District during the period of February 1998 through December. These data indicate the receiving water is estuarine by the CTR. Furthermore, Sacramento-San Joaquin Delta and Suisun Bay are identified as supporting estuarine habitat in the Basin Plan; therefore, this receiving water falls under the Basin

Plan's definition for estuarine water, and the effluent limitations in this Order are based on the more stringent of fresh and saltwater objectives/criteria.

**f. Receiving Water Hardness.** Some WQOs/WQC are hardness dependent. The City of Antioch's receiving water sampling-station is located upstream, approximately two miles east of the Discharger's outfall, and therefore is representative of the Discharger's receiving water. 1734 receiving water hardness data values were obtained during May 1995 through December 2001 at the City of Antioch's receiving water sampling-station. The minimum observed hardness data value is 32 mg/L and the maximum value is 1100 mg/L. Section F.2.f Hardness, of the CTR (page 31692), states that the derivations of criteria are most accurate between the hardness values of 25 mg/L to 400 mg/L, and therefore Regional Water Board staff censored this receiving water data by eliminating all hardness values above 400 mg/L. This censored receiving water data set contains 1478 hardness data values. To determine a representative hardness value for the CTR's intended level of protection from this censored data set, Regional Water Board staff used the adjusted geometric mean (AGM), which is the same method used in determining the Water-Effect Ratio (It is believed that hardness plays a similar role as the Water-Effect Ratio in influencing the toxicity of metals). AGM is the value that 30% of the data points fall below the AGM, and from this censored receiving water data, the AGM is calculated to be 68 mg/L. The following lists the procedure to calculate an AGM:

- 1) Calculate the logarithms of each hardness value.
- 2) Calculate the arithmetic mean of the logarithms.
- 3) Calculate the standard deviation(s) of the logarithms.
- 4) Calculate the standard error (SE) of the arithmetic mean:  
$$SE = s/\sqrt{n}$$
- 5) Calculate  $A = \text{arithmetic mean} - t_{0.7} \times SE$   
where  $t_{0.7}$  is the value of Student's  $t$  statistics for a one-sided probability of 0.7 with  $n-1$  degrees of freedom,  $n$ -sample size. When the Sample size is large, the Student  $t$  statistics can be approximate by the normal distribution  $z$ -statistics. With a sample size of 1478,  $t_{0.7} = 0.524$ .
- 6) Take the antilogarithm of  $A$ , antilog  $A$  is the Adjusted Geometric Mean (AGM).

**3. Determining the Need for WQBELs.** Assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required.

**a.** For the following non-priority pollutants, Regional Water Board staff used available monitoring data, receiving water's designated uses, and/or previous permit pollutant limitations to determine Reasonable Potential.

- 1) **pH.** This effluent limitation is unchanged from the previous permit, and is based on the Basin Plan (Chapter 4, Table 4-2).
- 2) **Temperature.** The State's Thermal Plan indicates that for existing discharges to Enclosed Bays (e.g., San Francisco Bay), discharges shall comply with limitations necessary to assure protection of beneficial uses. The Discharger conducted a Thermal Study, dated June 1973, that concluded elevated temperatures in Discharge Point 001 do not adversely affect beneficial uses as permitted under the previous

permit. The Thermal Study found that the thermal plume predominately occurs near the surface, and the location and magnitude of the plume changes significantly based on the tidal cycle. The Regional Water Board in Resolution No. 76-16 and the State Water Board in Resolution No 79-108 granted the Discharger an exception to the Thermal Plan. This effluent limitation is unchanged from the previous permits, and is based on BPJ, Regional Water Board Resolution No. 76-16, and State Water Board Resolution No. 79-108.

- b. Reasonable Potential Analysis.** For priority pollutants, Regional Water Board staff analyzed the Discharger's self-monitoring effluent data (from the years 2002 through 2005) and ambient background data, and considered the nature of the Facility's operations to determine if the discharge from Discharge Point 001 demonstrates Reasonable Potential. Using the method prescribed in Section 1.3 of the SIP, Regional Water Board staff compared the effluent data with numeric and narrative WQOs in the Basin Plan and numeric WQC from USEPA, the NTR, and the CTR ("Reasonable Potential Analysis" or "RPA"). The Basin Plan objectives and CTR criteria are shown in Attachment 2 of this Fact Sheet.

The RPA identifies the observed MEC in the effluent for each pollutant, based on effluent concentration data. There are three triggers in determining Reasonable Potential:

- 1) The first trigger is activated if the MEC is greater than the lowest applicable WQO ( $MEC \geq WQO$ ), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than the adjusted WQO, then that pollutant has reasonable potential, and a WQBEL is required.
- 2) The second trigger is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO ( $B > WQO$ ) and the pollutant was detected in any of the effluent samples.
- 3) The third trigger is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even though both MEC and B are less than the WQO/WQC. A limitation may be required under certain circumstances to protect beneficial uses.

- c. Ambient Background Data Used in the RPA.** For the RPA, ambient background concentrations are the observed maximum water column concentrations. The SIP allows background to be determined on a discharge-by-discharge or water body-by-water body basis (SIP section 1.4.3). Consistent with the SIP, Regional Water Board staff has chosen to use a water body-by-water body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis.

With this in mind, the Sacramento River Station fits the guidance for ambient background in the SIP compared to other stations in the Regional Monitoring Program (RMP). Section 1.4.3 of the SIP specifies that "preference should be given to... concentrations immediately upstream or near the discharge, but not within an allowed mixing zone for the discharge." The SIP further states that data are applicable

if they are “representative of the ambient receiving water column that will mix with the discharge.” The Sacramento River station is upstream, not within a mixing zone, and does represent water that will mix with the discharge. The Sacramento River is the primary source of fresh inflow water to the Sacramento-San Joaquin Delta, which flows to Suisun Bay. Salt water also influences Suisun Bay through diurnal tidal currents but its influence is generally less during the wet seasons when Sacramento-San Joaquin Delta outflow is the highest (Jan-April).

WQBELs were calculated using RMP data from 2000 through 2005 for the Sacramento River Station. However, not all the constituents listed in the CTR were analyzed by the RMP during this time. The August 6, 2001 Letter addressed this data gap by requiring the Discharger to conduct additional monitoring.

- d. RPA Determination.** The MECs, WQOs/WQC, bases for the WQOs/WQC, background concentrations used, and Reasonable Potential conclusions from the RPA are listed in the following table for all constituents analyzed. Some of the constituents in the CTR were not determined because of the lack of an objective/criteria or effluent data. Based on the RPA methodology in the SIP, some constituents did not demonstrate Reasonable Potential. The RPA results are shown below and Attachment 2 of this Fact Sheet. The pollutants that exhibit Reasonable Potential are copper, cyanide, and chlorodibromomethane, and dichlorobromomethane.

CTR #	PRIORITY POLLUTANTS (µg/L)	MEC or Minimum DL <sup>1</sup>	Governing WQO/WQC	Maximum Background or Minimum DL <sup>1,2</sup>	RPA Results <sup>3</sup>
1	Antimony	1.9	14	0.337	No
2	Arsenic	16	36	2.42	No
3	Beryllium	0.17	No Criteria	0.126	Undetermined
4	Cadmium	0.44	1.82	0.04	No
5a	Chromium (III or Total)	130	150.92	Not Available	No
5b	Chromium (VI)	4.3	11.43	Not Available	No
6	Copper	7.6	3.73	4.613	Yes
7	Lead	0.62	1.95	1.1278	No
8	Mercury	0.01295	0.025	0.0108	No
9	Nickel	7.7	8.28	6.5	No
10	Selenium	2	5.0	0.133	No
11	Silver	1	2.09	0.01	No
12	Thallium	1	1.7	Not Available	No
13	Zinc	63	85.62	7.022	No
14	Cyanide	5.9	1.0	0.5	Yes
16	2,3,7,8-TCDD (Dioxin)	6.4E-07	1.3E-08	4.8E-08	Undetermined
17	Acrolein	20	320	0.5	No
18	Acrylonitrile	20	0.059	0.02	No
19	Benzene	1	1.2	0.3	No
20	Bromoform	0.15	4.3	0.5	No
21	Carbon Tetrachloride	1	0.25	0.06	No
22	Chlorobenzene	1	680	0.5	No
23	Chlorodibromomethane	1.9	0.41	0.5	Yes
24	Chloroethane	1	No Criteria	0.5	Undetermined
25	2-Chloroethylvinyl Ether	2	No Criteria	0.5	Undetermined
26	Chloroform	3.5	No Criteria	0.5	Undetermined
27	Dichlorobromomethane	1.9	0.56	0.5	Yes
28	1,1-Dichloroethane	1	No Criteria	0.5	Undetermined
29	1,2-Dichloroethane	1	0.38	0.04	No
30	1,1-Dichloroethylene	1	0.057	0.5	No
31	1,2-Dichloropropane	1	0.52	0.5	No
32	1,3-Dichloropropylene	1	10	Not Available	Cannot determine
33	Ethylbenzene	1	3100	0.5	No
34	Methyl Bromide	1	48	0.5	No
35	Methyl Chloride	1	No Criteria	0.5	Undetermined
36	Methylene Chloride	1	4.7	0.5	No
37	1,1,2,2-Tetrachloroethane	1	0.17	0.5	No
38	Tetrachloroethylene	0.65	0.8	0.5	No
39	Toluene	1	6800	0.3	No
40	1,2-Trans-Dichloroethylene	1	700	0.5	No

CTR #	PRIORITY POLLUTANTS (µg/L)	MEC or Minimum DL <sup>1</sup>	Governing WQO/WQC	Maximum Background or Minimum DL <sup>1,2</sup>	RPA Results <sup>3</sup>
41	1,1,1-Trichloroethane	1	No Criteria	0.5	Undetermined
42	1,1,2-Trichloroethane	1	0.6	0.5	No
43	Trichloroethylene	1	2.7	0.5	No
44	Vinyl Chloride	1	2	0.5	No
45	2-Chlorophenol	0.94	120	1.2	No
46	2,4-Dichlorophenol	0.94	93	1.3	No
47	2,4-Dimethylphenol	0.94	540	1.3	No
48	2-Methyl-4,6-Dinitrophenol	0.87	13.4	1.2	No
49	2,4-Dinitrophenol	3.5	70	0.7	No
50	2-Nitrophenol	3	No Criteria	1.3	Undetermined
51	4-Nitrophenol	5.7	No Criteria	1.6	Undetermined
52	3-Methyl-4-Chlorophenol	0.94	No Criteria	1.1	Undetermined
53	Pentachlorophenol	9.5	0.28	1	No
54	Phenol	49	21000	1.3	No
55	2,4,6-Trichlorophenol	1.9	2.1	1.3	No
56	Acenaphthene	2	1200	0.00024	No
57	Acenaphthylene	1	No Criteria	0.000059	Undetermined
58	Anthracene	0.04	9600	0.000197	No
59	Benidine	100	0.00012	0.0015	No
60	Benzo(a)Anthracene	0.08	0.0044	0.0011	No
61	Benzo(a)Pyrene	0.05	0.0044	0.000822	No
62	Benzo(b)Fluoranthene	0.02	0.0044	0.0012	No
63	Benzo(ghi)Perylene	0.08	No Criteria	0.001246	Undetermined
64	Benzo(k)Fluoranthene	0.02	0.0044	0.000546	No
65	Bis(2-Chloroethoxy)Methane	10	No Criteria	Not Available	Undetermined
66	Bis(2-Chloroethyl)Ether	10	0.031	0.3	No
67	Bis(2-Chloroisopropyl)Ether	10	1400	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	10	1.8	0.68	No
69	4-Bromophenyl Phenyl Ether	10	No Criteria	0.23	Undetermined
70	Butylbenzyl Phthalate	10	3000	0.0065	No
71	2-Chloronaphthalene	10	1700	0.31	No
72	4-Chlorophenyl Phenyl Ether	10	No Criteria	0.31	Undetermined
73	Chrysene	10	0.0044	0.000997	No
74	Dibenzo(a,h)Anthracene	0.2	0.0044	0.000033	No
75	1,2 Dichlorobenzene	1	2700	0.3	No
76	1,3 Dichlorobenzene	1	400	0.3	No
77	1,4 Dichlorobenzene	1	400	0.3	No
78	3,3-Dichlorobenzidine	50	0.04	0.001	No
79	Diethyl Phthalate	10	23000	0.21	No
80	Dimethyl Phthalate	10	313000	0.21	No
81	Di-n-Butyl Phthalate	10	2700	1.72	No
82	2,4-Dinitrotoluene	10	0.11	0.27	No
83	2,6-Dinitrotoluene	10	No Criteria	0.29	Undetermined
84	Di-n-Octyl Phthalate	10	No Criteria	0.38	Undetermined
85	1,2-Diphenylhydrazine	10	0.04	0.0087	No
86	Fluoranthene	0.1	300	0.0028	No
87	Fluorene	0.2	1300	0.000352	No
88	Hexachlorobenzene	10	0.00075	0.000065	No
89	Hexachlorobutadiene	10	0.44	0.3	No
90	Hexachlorocyclopentadiene	50	240	0.3	No
91	Hexachloroethane	10	1.9	0.2	No
92	Indeno(1,2,3-cd) Pyrene	0.1	0.0044	0.00106	No
93	Isophorone	10	8.4	0.3	No
94	Naphthalene	1	No Criteria	0.00369	Undetermined
95	Nitrobenzene	10	17	0.29	No
96	N-Nitrosodimethylamine	10	0.00069	0.3	No
97	N-Nitrosodi-n-Propylamine	10	0.005	0.001	No
98	N-Nitrosodiphenylamine	10	5	0.001	No
99	Phenanthrene	10	No Criteria	0.00137	Undetermined
100	Pyrene	0.2	960	0.00261	No
101	1,2,4-Trichlorobenzene	10	No Criteria	0.3	Undetermined
102	Aldrin	0.05	0.00013	0.00000006	No
103	alpha-BHC	0.05	0.0039	0.0000404	No
104	beta-BHC	0.05	0.014	0.00005	No
105	gamma-BHC	0.05	0.019	0.0001047	No
106	delta-BHC	0.05	No Criteria	0.00000072	Undetermined
107	Chlordane	0.05	0.00057	0.0001428	No
108	4,4'-DDT	0.1	0.00059	0.0005463	No
109	4,4'-DDE	0.1	0.00059	0.000061	No
110	4,4'-DDD	0.1	0.00083	0.0000496	No

CTR #	PRIORITY POLLUTANTS (µg/L)	MEC or Minimum DL <sup>1</sup>	Governing WQO/WQC	Maximum Background or Minimum DL <sup>1,2</sup>	RPA Results <sup>3</sup>
111	Dieldrin	0.1	0.00014	<b>0.0001169</b>	No
112	alpha-Endosulfan	0.05	0.0087	<b>0.0000571</b>	No
113	beta-Endosulfan	0.1	0.0087	<b>0.0000341</b>	No
114	Endosulfan Sulfate	0.1	110	<b>0.0002822</b>	No
115	Endrin	0.1	0.0023	<b>0.0000024</b>	No
116	Endrin Aldehyde	0.1	0.76	Not Available	Cannot determine
117	Heptachlor	0.05	0.00021	<b>0.0000009</b>	No
118	Heptachlor Epoxide	0.05	0.0001	<b>0.000024</b>	No
119-125	PCBs sum	<b>0.0001487</b>	0.00017	<b>0.0001487</b>	No
126	Toxaphene	2	0.0002	Not Available	Cannot determine
	Tributyltin	0.002	0.01	0.002	No
	Total PAHs	9.5	15.0	0.016197	No

[1] Concentration in bold is the actual detected maximum concentration, otherwise the concentration shown is the maximum detection level.

[2] Maximum Background = Not Available, if there is not monitoring data for this constituent.

[3] RPA Results = Yes, if MEC > WQO/WQC,  
= No, if MEC or all effluent concentration non-detect < WQO/WQC,  
= Undetermined, if no objective promulgated, and  
= Cannot be determined due to lack of data.

1) **Constituents with limited data.** The Discharger has performed sampling and analysis for the constituents listed in the CTR. This data set was used to perform the RPA. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are not available. The Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this Order or to continue monitoring.

2) **Pollutants with no Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required. If concentrations of these constituents are found to have increased significantly, the Discharger will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

#### e. RPA Considerations for Specific Pollutants.

1) **Copper.** The saltwater criteria for copper in the adopted CTR are 3.1 µg/L for chronic protection and 4.8 µg/L for acute protections. Included in the CTR are translator values to convert the dissolved criteria to total criteria. The SIP, Section 1.4.1, and the June 1996 USEPA guidance document, entitled *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion*, describe this process and provide guidance on how to establish a site-specific translator. Using the CTR translator, translated criteria of 3.7 µg/L for chronic protection and 5.8 µg/L for acute protection were used to calculate effluent limitations. Self-monitoring data for the period of January 2002 through September 2005 indicate copper was detected 44 out of 46 samples. The detection levels ranged from 1.5 µg/L to 7.6 µg/L (MEC), and the minimum detection limit was 2 µg/L.



This Order establishes effluent limitations for copper because both the 7.6 µg/L MEC and 4.6 µg/L ambient background values exceed the governing WQC of 3.7 µg/L, demonstrating Reasonable Potential.

- 2) **Cyanide.** Cyanide WQC were promulgated in the NTR for specific waters, which include New York Slough. The NTR established a Criterion Chronic Concentration (CCC) and a Criterion Maximum Concentration (CMC) for the protection of aquatic life of 1 µg/L. Self-monitoring data for the period of January 2002 through September 2005 indicate cyanide was detected, but not quantified, 12 out of 44 samples. The detection levels ranged from 2.1 µg/L to 5.9 µg/L (MEC), and the minimum detection limit was 10 µg/L.

This Order establishes effluent limitations for cyanide because the 5.9 µg/L MEC exceeds the governing CCC and CMC of 1 µg/L, demonstrating Reasonable Potential.

- 3) **Chlorodibromomethane.** The CTR contains a numeric water quality criterion of 0.41 µg/L for the protection of human health based on the consumption of water and aquatic organisms. Self-monitoring data for the period of January 2002 through September 2005 indicate chlrodibromomethane was detected 3 out of 4 samples. The detection levels ranged from 0.61 µg/L to 1.9 µg/L (MEC), and the minimum detection limit was 1 µg/L.

This Order establishes effluent limitations for chlorodibromomethane because the 1.9 µg/L MEC exceeds the governing WQC of 0.41 µg/L, demonstrating Reasonable Potential.

- 4) **Dichlorobromomethane.** The CTR contains a numeric water quality criterion of 0.56 µg/L for the protection of human health based on the consumption of water and aquatic organisms. Self-monitoring data for the period of January 2002 through September 2005 indicate chlrodibromomethane was detected 3 out of 4 samples. The detection levels ranged from 0.54 µg/L to 1.9 µg/L (MEC), and the minimum detection limit was 1 µg/L.

This Order establishes effluent limitations for dichlorobromomethane because the 1.9 µg/L MEC exceeds the governing WQC of 0.56 µg/L, demonstrating Reasonable Potential.

- 5) **Mercury.** The previous permit includes an effluent limit of 0.68 µg/L for this pollutant. This Order implements the policy and regulations of the SIP and Basin Plan in regard to mercury. Self-monitoring data for the period from January 2002 through September 2005 indicate mercury was detected in 41 samples. The detection levels ranged from 0.00025 µg/L to 0.01295 µg/L (MEC), which is below the WQC of 0.025 µg/L for mercury. This Order does not contain effluent limits, because there is no demonstration of Reasonable Potential, and therefore, no WQBELs are required. This Order is consistent with the anti-degradation provision of 40 CFR §131.12 and with the anti-backsliding requirements of the CWA and Federal regulations.

- 4. WQBEL Calculations.** WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedences of the WQOs or WQC. The WQBELs were calculated based on appropriate WQOs/WQC and the appropriate procedures specified in Section 1.4 of the SIP. The WQOs or WQC used for each pollutant with Reasonable Potential is indicated in the following table:

Pollutant	Chronic WQO/WQC ( $\mu\text{g/L}$ )	Acute WQO/WQC ( $\mu\text{g/L}$ )	Human Health WQC ( $\mu\text{g/L}$ )	Basis of WQO/WQC
Copper	3.7	5.8	1300	CTR
Cyanide	1	1	700	NTR
Chlorodibromomethane	--	--	0.41	CTR
Dichlorobromomethane	--	--	0.56	CTR

**a. Effluent Limit Calculations.**

PRIORITY POLLUTANTS	Copper	Cyanide	Chlorodibromomethane	Dichlorobromomethane
Basis and Criteria type	CTR SW	NTR - SW	CTR - HH	CTR - HH
Lowest Dissolved WQO	3.1	1.0	0.41	0.56
CTR Translators	0.83			
no. of samples per month	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	N	N
HH criteria analysis required? (Y/N)	Y	N	Y	Y
Total Applicable Acute WQO	5.78	1	N/A	N/A
Total Applicable Chronic WQO	3.73	1	N/A	N/A
HH criteria	1300	700	0.41	0.56
Background (max conc for Aquatic Life calc)	4.613	0.5		
Background (avg conc for HH calc)	3.539	0.425	0.5	0.5
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	N
ECA acute	5.8	1		
ECA chronic	3.7	1		
ECA HH	1300	700	0.41	0.56
No. of data points <10 or atleast 80% reported non detect?	N	N	Y	Y
avg of data points	3.1			
SD	1.24			
CV calculated	0.4	N/A	N/A	N/A
CV (Selected) - Final	0.4	0.6	0.60	0.60
ECA acute mult99	0.44	0.32		
ECA chronic mult99	0.64	0.53		
LTA acute	2.54	0.32		
LTA chronic	2.4	0.53		
minimum of LTAs	2.4	0.32		
AMEL mult95	1.36	1.55	1.55	1.55
MDEL mult99	2.27	3.11	3.11	3.11
AMEL (aq life)	3.26	0.50		
MDEL(aq life)	5.47	1.00		
MDEL/AMEL Multiplier	1.67	2.01	2.01	2.01
AMEL (human hlth)	1300	700	0.41	0.56
MDEL (human hlth)	2177	1404	0.82	1.12
minimum of AMEL for Aq. life vs HH	3.26	0.5	0.41	0.56
minimum of MDEL for Aq. Life vs HH	5.47	1.0	0.82	1.12
Current limits in permit (daily)	4.9	N/A	N/A	N/A
Final limit - AMEL	3.3	0.5	0.41	0.56
Final limit - MDEL	5.5	1.0	0.82	1.12
Max Effl Conc (MEC), 2000-2004	7.6	6	1.9	1.9

**b. Alternative Limit for Cyanide.** As described in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005, the Regional Water Board is proposing to develop site-specific criteria for cyanide. In this report, the proposed site-specific criteria for marine waters are 2.9 µg/L as a four-day average, and 9.4 µg/L as a one-hour average. For shallow water dischargers (i.e., USS-Posco Industries), this report also recommends using an attenuation factor of 3.5 in calculating final water quality based

effluent limits. Based on these assumption, and the Dischargers current cyanide data (coefficient of variation of 0.6), final water quality based effluent limits for cyanide will be 18.6 µg/L as a Maximum Daily, and 9.3 µg/L as an Monthly Average. These alternative limits will become effective only if the site-specific objective adopted for cyanide contains the same assumptions in the staff report, dated November 10, 2005.

**c. Comparison to Previous Permit Limitations.** WQBELs in this Order are revised and updated from the limits in the previous permit and their presence in this Order is based on evaluation of the Discharger's data as described in this Fact Sheet (Determining the Need for WQBELs). For mercury, the effluent limitation is discontinued because there is no demonstration of Reasonable Potential, and therefore, no WQBELs are required. For chromium VI, lead, zinc, and nickel, concentration-based effluent limitations are discontinued, but the mass-based effluent limitations are in this Order as in the previous permit. This Order also contains concentration-based effluent limitations for copper, cyanide chlorodibromomethane, and dichlorobromomethane whereas the previous permit does not. This Order's technology-based effluent limitations were calculated and implemented the same as in the previous permit.

**5. Whole Effluent Toxicity (WET).** The Basin Plan specifies a narrative objective for toxicity, requiring that all waters shall be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alternations in population, community ecology, or receiving water biota. The whole effluent toxicity limits contained in this Order are necessary to ensure that this objective is protected.

- a. Whole Effluent Acute Toxicity.** This Order includes effluent limits for whole-effluent acute toxicity that are unchanged from the previous permit, and is based on the Basin Plan (Table 4-2).
- b. Whole Effluent Chronic Toxicity.** This limit establishes conditions and protocol by which compliance with the Basin Plan narrative WQO for toxicity will be demonstrated. Conditions include required monitoring and evaluation of the effluent for chronic toxicity and numerical values for chronic toxicity evaluation to be used as 'triggers' for initiating accelerated monitoring and toxicity reduction evaluation(s). This Order requires the Discharger to conduct a screening phase monitoring requirement and implement toxicity identification and reduction evaluations when there is consistent chronic toxicity in the discharge. The limitations for chronic toxicity are based on the Basin Plan narrative WQO for toxicity, Basin Plan effluent limitations for chronic toxicity (Table 4-6), U.S. EPA and State Water Board Task Force guidance, applicable federal regulations [40 CFR 122.44(d)(1)(v)], and BPJ.
- c. Dilution Credit.** The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any non-tidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof. The Basin Plan states that dilution credit may be granted on a discharger-by-discharger and pollutant-by-pollutant basis based on provisions of the SIP. Exceptions will be

considered by the Regional Water Board where a discharger meets the following requirements:

- (1) Completion of a source identification study;
- (2) An aggressive pretreatment and source control program is in place;
- (3) Commitment of resources to fully implement the source control and reduction plan;
- (4) A demonstration that the proposed effluent limitation will result in compliance with the water quality objectives (in the receiving waters). Such demonstration shall be based on ambient monitoring at a frequency equal to that typically required for effluent monitoring; and
- (5) An evaluation of worst-case conditions (in terms of tidal cycle, currents) through monitoring and /or modeling to demonstrate that water quality objectives will continue to be met.

The Discharger requested an exception to the assigned dilution ratio of  $D=0$  (and thus to shallow water effluent limitations) regarding its chronic toxicity effluent limitation.

In reports dated November 6, 1996, and February 6, 1997, *Toxic Identification Evaluation* (TIE), the Discharger demonstrated that it has an aggressive pretreatment and source control program in place. The Discharger continued source identification studies (TIEs September 20, 1998, December 19, 1998, and September 28, 2000), and in a report dated January 21, 2003, summarized its investigative efforts to identify and control toxicity in its effluent. Based upon these reports, the Regional Water Board finds that the Discharger has taken reasonable steps to reduce toxicity to required levels.

To demonstrate compliance with water quality objectives, the Discharger submitted a CORMIX model (Blair report, dated April 26, 1994) that demonstrated a mixing zone of 250 feet that has a 12.5:1 dilution ratio. To further demonstrate that a mixing zone will not compromise the integrity of the receiving waters and corresponding beneficial uses, the Discharger conducted receiving water studies, according to plans dated November 10, 2000, and July 24, 2003, to assess the toxicity of the Discharger's effluent on the receiving water.

Based upon the information submitted by the Discharger, the Board finds that the Discharger has met the requirements for a dilution credit specified in the Basin Plan and SIP, and finds that an exception to the discharge prohibition is warranted for the shallow water discharge to New York Slough.

The Basin Plan directs that dilution may be allowed for shallow water dischargers only if needed to meet effluent limits. Regional Water Board staff conducted a statistical analysis of the Discharger's chronic toxicity data. The analysis indicated that the Discharger can meet a limit of 8.1 TUC 99% of the time, which is approximately 5:1 dilution. Based upon this statistical analysis and the Discharger's demonstration that the proposed dilution credit will result in compliance with the water quality objectives in the receiving water (*Receiving Water Sampling Plan, Final Report August 12, 2004*), the Regional Water Board grants a 5:1 dilution towards the Discharger's chronic toxicity effluent limitations.

### D. Final Effluent Limitations

#### Summary of Final Effluent Limitations Discharge Point 001

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	Standard Units			6.5	8.5	Basin Plan
Temperature	°F				93	Thermal Plan and BPJ
Settleable matter	ml/l/hr	0.1	0.2			Basin Plan
TSS	lbs/day	2365	5139			40 CFR § 420
Oil & Grease	lbs/day	1025	2391			40 CFR § 420
Copper	µg/L	3.3	5.5			CTR
Lead	lbs/day	15.5	31.5			40 CFR § 420 and 40 CFR § 433
Zinc	lbs/day	5.6	16.9			40 CFR § 420
Total Chromium	lbs/day	42.8	69.4			40 CFR § 433
Total Nickel	lbs/day	59.6	99.6			40 CFR § 433
Total Silver	lbs/day	6.0	10.8			40 CFR § 433
Naphthalene	lbs/day	--	0.68			40 CFR § 420
Tetrachloroethylene	lbs/day	--	1.03			40 CFR § 420

#### Summary of Final Effluent Limitations Discharge Point 002

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	Standard Units				6.5	8.5
Oil and Grease	Mg/L			15		
						Basin Plan
						Basin Plan

**1. Intake Water Credit.** As described below, the Discharger meets all the specified conditions in 40 CFR §122.45(g) and Section 1.4.4 of the SIP, and therefore, may receive intake water credit for copper.

- a. **40 CFR §122.45(g).** 40 CFR §122.45(g) allows credit for pollutants in intake water, in some cases where the facility is faced with situations in which limits are difficult or impossible to meet with BAT/BCT technology. Net credits are authorized only up to the extent necessary to meet the applicable limitation or standard, and if the intake water is taken from the same body of water into which the discharge is made.

In this case, it would be difficult for the Discharger to meet final WQBELs for copper with BAT/BCT technology. This is because copper is not used in any of the Facility's processes, and elevated concentrations appear to be an artifact of source water.

On the second condition, the discharge point is hydrologically connected to the intake source. Approximately 40% of the Discharger's intake water is from the San Joaquin River (part of the Delta system), and the intake structure is located approximately 1,600 feet upstream of Discharge Point 001. The balance of the Discharger's intake water comes from the Contra Costa Canal that also originates in the Delta approximately 10 miles east of Discharge Point 001. New York Slough, the effluent discharge receiving water, connects with the San Joaquin River just upstream of the confluence between the Sacramento and San Joaquin Rivers (the Delta System). The Contra Costa Canal Water is a part of the Delta system that flows to the San Joaquin River; therefore, it connects hydrologically to the receiving water. Comparisons of the San Joaquin River RMP station data and the Discharger's data, indicates reductions in copper concentrations in the Discharger's effluent discharge to New York Slough.

Based on these factors, Regional Water Board staff determined that the Discharger meets the conditions specified in 40 CFR §122.45(g) and that the intake water credit for copper in this Order is appropriate.

- b. **Section 1.4.4 of the SIP.** The SIP allows intake water credits provided the Discharger meets the following conditions to the satisfaction of the Regional Water Board:
- 1) The observed maximum ambient background concentration and the intake water concentration of the pollutant exceed the most stringent applicable WQO/WQC for that pollutant;
  - 2) The intake water credits are consistent with any TMDL applicable to the discharge;
  - 3) The intake water is from the same water body as the receiving water body;
  - 4) The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and
  - 5) The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

*Ambient Background.* The Sacramento River station, which fits the definition for ambient background in the SIP, is upstream, not within a mixing zone, and does represent water that will mix with the discharge. The RMP station at Sacramento River has been sampled for most of the inorganic and some of the organic toxic pollutants during the period from 2000 to 2005,

and during this period the RMP station measured concentrations of copper in six different samples. The maximum detected concentration measured was 4.61 µg/L, which is above the applicable WQO/WQC of 3.73 µg/L.

The Discharger measured copper in its intake water 9 times during the period 2000 to 2006. Copper was detected in all the samples, and the maximum detected concentration was 4.4 µg/L, which is above the applicable WQO/WQC of 3.73 ug/L.

Further, in March 2006, the Discharger measured dissolved copper in both intakes (San Joaquin River and Contra Costa Canal) and in the effluent discharge, and in seven out of the eight samples obtained, dissolved copper concentrations in the discharge were less than the weighted averages of the intake concentrations. Based on these results, we believe that beneficial uses are protected.

## **E. Interim Effluent Limitations**

### **1. Feasibility Evaluation**

The Discharger submitted an infeasibility to comply report for Discharge Point 001, dated February 23, 2006, for copper, cyanide, chlorodibromomethane, and dichlorobromomethane. Regional Water Board staff used the Discharger's self-monitoring data from January 2002 through September 2005 to confirm the Discharger's assertion of infeasibility.

- a. For copper, Regional Water Board staff statistically analyzed the data to compare the mean, 95<sup>th</sup> percentile, and 99<sup>th</sup> percentile with the long-term average (LTA), average monthly effluent limit (AMEL), and maximum daily effluent limit (MDEL). If the LTA, AMEL, and MDEL all exceed the mean, 95<sup>th</sup> percentile, and 99<sup>th</sup> percentile, it is feasible for the Discharger to comply with WQBELs. Based on this analysis and the comparisons in the following table, the Regional Water Board confirms the Discharger's assertion of infeasibility.

	<u>Mean / LTA</u>	<u>95<sup>th</sup> / AMEL</u>	<u>99<sup>th</sup> / MDEL</u>	<u>Feasible to Comply</u>
Copper	2.9 > 2.4	5.3 > 1.4	6.3 > 2.3	No

- b. For cyanide, the Discharger's self-monitoring data resulted in 12 detected values out of 44 samples of cyanide. The Regional Water Board finds this small number of detected data precludes any meaningful statistical analysis for the purpose of feasibility determination. However, the maximum effluent concentration (MEC) at 5.9 µg/L during this period exceeds the WQBELs. The Regional Water Board, therefore, considers the occurrence of the MEC value above the WQBELs to confirm the Discharger's assertion of infeasibility.
- c. For chlorodibromomethane and dichlorobromomethane, the Discharger sampled four times during the years 2002 through 2005. The Regional Water Board finds this small data set precludes any meaningful statistical analysis. The self-monitoring data for chlorodibromomethane resulted in three detected values out of only four samples, and ranged from 0.6 µg/L to the MEC of 1.9 µg/L, which exceeds the WQBELs. For dichlorobromomethane, self-monitoring data resulted in three detected values out of four



samples that ranged from 0.5 µg/L to the MEC of 1.9 µg/L, which exceeds the WQBELs. The Regional Water Board, therefore, considers the occurrences of the MEC values above the WQBELs to confirm the Discharger's assertion of infeasibility.

The following table summarizes the calculated WQBELs, and the feasibility to comply analysis for all the pollutants. The WQBELs calculation is attached as Attachment 3 of this Fact Sheet.

Pollutant	MDEL µg/L	AMEL µg/L	Feasible to Comply?
Copper	5.5	3.3	No
Cyanide	0.5	1.0	No
Chlorodibromomethane	0.4	0.8	No
Dichlorobromomethane	0.6	1.1	No

## 2. Determination of Interim Effluent Limitations

For copper, cyanide, chlorodibromomethane, and dichlorobromomethane, the Discharger has demonstrated, and the Regional Water Board has verified that immediate compliance with the final effluent limitations calculated according to the SIP is infeasible. The SIP requires the interim numeric effluent limitations for the pollutants be based on either interim performance-based limitations (IPBLs) or previous permit limitations, whichever is more stringent. Historically, IPBLs have been referenced to the 99.87th percentile value of recent effluent data. In determining what constitutes "recent plant performance", best professional judgment (BPJ) was used. Effluent monitoring data collected from 2002 through 2005 are considered representative of recent plant performance. These data specifically account for flow variation due to wet and dry years.

- a. For copper, the previous permit granted a five year compliance schedule. The maximum time schedule allowed by the CTR and SIP is five years. Therefore the Discharger cannot be granted another compliance schedule.
- b. For cyanide, the Regional Water Board granted, in the previous permit, a compliance schedule pursuant to the 2000 SIP §2.2.2, Interim Requirements for Providing Data (note 2005 SIP amendment deleted this section as it is not applicable to permits effective after May 18, 2003). This was to allow collection of ambient data, because the Regional Monitoring Program data were not complete primarily due to inadequate detection limits. The Discharger, thru BACWA and WSPA, helped fund an effort to collect these data as part of the collaborative receiving water monitoring for other CTR pollutants. The Regional Water Board has received these data, which form the basis for current permits. However, upon further consideration, the SIP §2.2.2 compliance schedule was granted in error, because cyanide is an NTR criterion and not a CTR criterion, and the SIP compliance schedule provisions apply to "...CTR criterion and/or effluent limitations." Thus, it is more appropriate to apply the Basin Plan's compliance schedule provision, which was the implementation tool for NTR criteria prior to the SIP superceding the provisions in the Basin Plan related to calculation of water quality based effluent limitations. As such, for cyanide, due to the adoption of the SIP, the Water Board has newly interpreted these cyanide criteria. The effective date of this new

interpretation is the effective date of the SIP (April 28, 2010) for implementation of these numeric Basin Plan objectives.

The previous permit did not include an effluent limit for cyanide. As previously discussed in section E.1 of this Fact Sheet, there were insufficient cyanide effluent data (i.e. detected values) during the years 2002 through 2005; therefore, Regional Water Board staff used cyanide effluent monitoring data collected from 2003 through 2006 as being representative of recent plant performance to develop statistically valid performance-based interim limits. The statistical analysis indicates that the 99.87<sup>th</sup> percentile of the recent cyanide effluent data is 22.0 µg/L (based on 20 detected values out of 42 samples), which is established in this Order as the interim limitation, expressed as a daily maximum limitation.

- c. For chlorodibromomethane and dichlorobromomethane, as previously discussed in section E.1 of this Fact Sheet, there were insufficient effluent data (i.e., number of samples) to develop statistically valid performance-based interim limits. The previous permit did not contain limitations for these constituents; therefore, the interim effluent concentration limitations are based on the minimum levels contained in the SIP. This Order established interim limitations, expressed as daily maximum limitations for chlorodibromomethane, and dichlorobromomethane of 2.0 µg/L each.

As a prerequisite to being granted the interim limits described above and the compliance schedule described in Provision VII.B.4 below, the Discharger must implement cyanide, chlorodibromomethane, and dichlorobromomethane source control strategies, as required by Provision VI.C.3.a of this Order.

**F. Land Discharge Specifications – N/A**

**G. Reclamation Specifications – N/A**

**V. RATIONALE FOR RECEIVING WATER LIMITATIONS**

**A. Surface Water**

1. **Receiving Water Limitations V.A.1 through V.A.3 (conditions to be avoided).** These limitations are in the previous permit and are based on the narrative/numerical objectives contained in Chapter 3 of the Basin Plan.
2. **Receiving Water Limitations V.A.4 (compliance with State Law).** This requirement is in the previous permit, requires compliance with Federal and State law, and is self-explanatory.

**B. Groundwater – N/A**

**VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

The principal purposes of a monitoring program by a discharger are to:

- 1) Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,

- 2) Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge,
- 3) Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and to
- 4) Prepare water and wastewater quality inventories.

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP also contains a sampling program specific for this Facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

- A. Influent Monitoring.** The MRP includes monitoring at intake points I-001 and I-002 for flow and copper concentrations should the Discharger want to receive intake water credit for copper as an alternative to complying with the concentration-based effluent limitations specified in IV.A.1.a in accordance with the requirements specified in IV.A.3 of this Order.
- B. Effluent Monitoring.** The MRP includes monitoring at discharge points M-001 and M-002. The MRP also includes monitoring at M-001 for non-conventional and toxic pollutants. This Order continues to require daily monitoring of flow, pH, and temperature to demonstrate compliance with effluent limitations. This Order also requires monthly monitoring for TSS, Settleable matter, Oil & Grease, copper, cyanide, lead, zinc, Total chromium, Total nickel, Total silver, naphthalene, tetrachloroethylene to demonstrate compliance with effluent limitations. The monitoring frequency for chlorodibromomethane and dichlorobromomethane has been increased from annually to twice per year to demonstrate compliance with effluent limitations. The monitoring frequency for mercury and selenium has been changed from "monthly" to "quarterly" because these constituents were not detected in concentrations above water quality objectives, but are identified in the 303d List as pollutants impairing the Sacramento-San Joaquin Delta. This Order requires monthly monitoring of all other priority pollutant metals, and annual monitoring for the remaining organic priority pollutants to determine Reasonable Potential including 2,3,7,8-TCDD congeners, tributyltin, and PAHs since these pollutants have sparse data with either limited or no detected values in the effluent during the period 2001 through 2005.
- C. Whole Effluent Toxicity Testing Requirements.** The Basin Plan adopted an Effluent Toxicity Characterization Program (ETCP), with the goal of developing and implementing

toxicity limits for each discharger based on actual characteristics of both receiving waters and waste streams. Dischargers were required, including this Discharger, to monitor their effluent using critical life stage toxicity tests to generate information on toxicity test species sensitivity and effluent variability to allow development of appropriate chronic toxicity effluent limitations. In 1988 and 1991, selected dischargers conducted two rounds of effluent characterization. A third round was completed in 1995, and the Regional Water Board is evaluating the need for an additional round. Regional Water Board guidelines for conducting toxicity tests and analyzing results were published in 1988 and last updated in 1991. The Regional Water Board implements water quality objectives for toxicity through the ETCP.

Characteristics, and thus toxicity, of the waste stream may have changed. This screening phase monitoring is important to help determine which test species is most sensitive to the toxicity of the effluent for compliance monitoring. This Order requires that the Discharger continue its effluent toxicity monitoring efforts as part of the compliance requirements. This requirement is based on the Basin Plan and BPJ.

#### **D. Receiving Water Monitoring**

1. **Surface Water.** The MRP includes monitoring at monitoring location R-001, R-002, R-003, and R-004 for conventional pollutants, and are unchanged from the previous permit.
2. **Groundwater – N/A**

#### **E. Other Monitoring Requirements – N/A**

### **VII. RATIONALE FOR PROVISIONS**

**A. Standard Provisions.** (Provision A). Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachments D and H of this Order.

#### **B. Special Provisions (Provision C).**

1. **Reopener Provisions.** These provisions are based on 40 CFR 123 and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.
2. **Special Studies and Additional Monitoring Requirements**
  - a. **Effluent Characterization for Selected Constituents.** This Order does not include effluent limitations for the selected constituents addressed in the August 6, 2001 Letter that do not demonstrate Reasonable Potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the August 6, 2001 Letter and as specified in the MRP of this Order. If concentrations of these constituents increase significantly, the Discharger will be required to investigate the source of the increases and establish remedial measures, if the increases result in reasonable potential

to cause or contribute to an excursion above the applicable WQO/WQC. This provision is based on the Basin Plan and the SIP.

- b. **Ambient Background Monitoring.** This provision, which requires the Discharger to continue to conduct receiving water monitoring is based on the previous Order and the Basin Plan.
- c. **Mass offset.** This option is provided to encourage the Discharger to implement aggressive reduction of mass loads to New York Slough.

### 3. **Best Management Practices and Pollution Prevention.**

- a. **Pollutant Minimization.** This provision is based on the Basin Plan, page 4-25 – 4-28, and the SIP, Section 2.1, Compliance Schedules.
- b. **Storm Water Pollution Prevention.** This provision, is based on and consistent with Basin Plan objectives, statewide storm water requirements for industrial facilities, and applicable USEPA regulations.

### 4. **Compliance Schedules**

Compliance schedules are established based on Section 2.1 of the SIP for limits derived from CTR WQC or based on the Basin Plan for limits derived from the Basin Plan WQOs.

If an existing Discharger cannot immediately comply with a new and more stringent effluent limitation, the SIP and the Basin Plan authorize a compliance schedule in the permit. To qualify for a compliance schedule, both the SIP and Basin Plan require that the following information be submitted to the Regional Water Board to support a finding of infeasibility:

- i. documentation that diligent efforts have been made to quantify pollutant levels in the discharge and sources of the pollutant in the waste stream, including the results of those efforts;
- ii. documentation of source control and/or pollution minimization efforts currently under way or completed;
- iii. a proposed schedule for additional or future source control measures, pollutant minimization or waste treatment; and
- iv. a demonstration that the proposed schedule is as short as practicable.

Interim effluent limitations were derived for cyanide, chlorodibromomethane, and dichlorobromomethane for which the Discharger has shown infeasibility of complying with the respective final limitations and has demonstrated that compliance schedules are justified based on the Discharger's source control and pollution minimization efforts in the past, and continued efforts in the present and future

This Order establishes compliance schedules until April 28, 2010 for cyanide, and until May 18, 2010, for chlorodibromomethane, and dichlorobromomethane. This Order establishes compliance schedules for these pollutants that extend beyond 1 year. Pursuant to the SIP, and 40 CFR 122.47, the Regional Water Board shall establish interim numeric limitations and interim requirements to control the pollutants. This Order establishes interim limits for these pollutants based on the previous permit limits or existing plant

performance, whichever is more stringent. The Regional Water Board may take appropriate enforcement actions if interim limitations and requirements are not met. The cyanide interim limitation shall remain in force until April 28, 2010, or until the Regional Water Board amends the limitations based on additional data or site-specific objectives (SSOs).

**5. Construction, Operation, and Maintenance Specifications – N/A**

**6. Special Provisions for Municipal Facilities (POTWs Only) – N/A**

**7. Other Special Provisions**

**Contingency Plan.** This provision is based on the requirements stipulated in Regional Water Board Resolution No. 74-10.

**VIII. PUBLIC PARTICIPATION**

The San Francisco Bay Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for USS-POSCO Industries. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

**A. Notification of Interested Parties**

-The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Contra Costa Times on March 10, 2006.

**B. Written Comments**

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order, Attention Gayleen Perreira.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on April 12, 2006.

**C. Public Hearing**

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: May 10, 2006  
Time: 9:00 a.m.  
Location: Elihu Harris State Office Building  
1515 Clay Street  
Oakland, CA

1st floor Auditorium

Contact: Ms. Gayleen Perreira, Phone: (510)622-2407; email: [gperreira@waterboards.ca.gov](mailto:gperreira@waterboards.ca.gov)

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is [www.waterboards.ca.gov/sanfranciscobay](http://www.waterboards.ca.gov/sanfranciscobay) where you can access the current agenda for changes in dates and locations.

**D. Waste Discharge Requirements Petitions**

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

**E. Information and Copying**

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510)622-2300.

**F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Ms. Gayleen Perreira at (510) 622-2407, or by e-mail at [gperreira@waterboards.ca.gov](mailto:gperreira@waterboards.ca.gov).

## **ATTACHMENT 1 – CALCULATIONS FOR PRODUCTION BASED EFFLUENT LIMITATIONS**



## ATTACHMENT 1

### CALCULATIONS FOR PRODUCTION-BASED BPT, BCT, AND BAT EFFLUENT LIMITATIONS FOR USS POSCO

**References:**

- 1) 40 CFR Part 420 Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for the Iron and Steel Manufacturing (Acid pickling, Cold forming, Alkaline cleaning, and Hot Coating Subcategories)
- 2) 40 CFR Part 433 Metal Finishing Point Source Category
- 3) U.S. EPA NPDES Permit Writers' Manual
- 4) NPDES Application for Permit Reissuance (May 2005)
- 5) Steel Finishing average daily production rates, based on years 2000 – 2005, provided by the facility.

#### Production-Based Effluent Limitations

**STEP 1: Determine the production rate effluent limitations:**

Category	National Effluent Limitations Guidelines (ELGs)	'A' ELGs Daily Maximum	'B' ELGs Monthly Average	'C' Production Rate (lbs/day)	'A' times 'C' Daily Maximum (lbs/day)	'B' times 'C' Monthly Average (lbs/day)
1:	IRON AND STEEL MANUFACTURING POINT SOURCE CATEGORY					
	Subpart I, Acid Pickling:					
A	Sulfuric Acid Pickling					
	Strip, sheet and plate (lbs/1000lb)			2314000		
	TSS	0.0526	0.0225		121.72	52.07
	Lead	0.000338	0.000113		0.782	0.261
	Zinc	0.000451	0.000150		1.044	0.347
B	Hydrochloric Acid Pickling					
	Strip, sheet and plate (lbs/1000lb)			10628000		
	TSS	0.0818	0.0350		869.37	371.98
	Lead	0.000526	0.000175		5.59	1.86
	Zinc	0.000701	0.000234		7.45	2.49
C	Fume Scrubbers (1 unit) (Kg/day each)			-----		
	TSS	5.72	2.45		12.6	5.40
	Lead	0.0368	0.0123		0.081	0.027
	Zinc	0.0491	0.0164		0.108	0.036
D	Acid Regeneration (absorber vent scrubber) (Kg/day)			-----		
	TSS	38.2	16.3		84.216	35.935
	Lead	0.245	0.0819		0.54	0.181
	Zinc	0.327	0.109		0.721	0.240
	Subpart J, Cold Forming					
E	Recirculation: Multiple Stands (lbs/1000lb)			10628000		
	TSS	0.00626	0.00313		66.53	33.27
	O&G	0.00261	0.00104		27.74	11.05
	Lead	0.0000469	0.0000156		0.498	0.166
	Zinc	0.0000313	0.0000104		0.333	0.111
	Naphthalene	0.0000104	NA		0.111	
	Tetrachloroethylene	0.0000156	NA		0.166	
F	Combination (lbs/1000lb)			3144000		
	TSS	0.0751	0.0376		236.11	118.21
	O&G	0.0313	0.0125		98.41	39.3
	Lead	0.000563	0.000188		1.77	0.591
	Zinc	0.000376	0.000125		1.18	0.393
	Naphthalene	0.000125	NA		0.393	
	Tetrachloroethylene	0.000188	NA		0.591	
G	Direct application: Single Stand (lbs/1000lb)			4770000		
	TSS	0.0225	0.0113		107.325	53.90
	O&G	0.00939	0.00376		44.79	17.94
	Lead	0.000169	0.0000563		0.806	0.269
	Zinc	0.000113	0.0000376		0.539	0.179

Step 1 Continued:

Category	ELGs	'A'	'B'	'C'	'A' times 'C'	'B' times 'C'
	Naphthalene	0.0000376	NA		0.179	
	Tetrachloroethylene	0.0000563	NA		0.269	
	Subpart K, Alkaline Cleaning			14678000		
H	Continuous (lbs/1000lb)					
	TSS	0.102	0.0438		1497.16	642.90
	O&G	0.0438	0.0146		642.9	214.30
	Subpart L, Hot Coating			3670000		
I	Galvanizing (lbs/1000lb)					
	Strip, sheet, and misc. products					
	TSS	0.175	0.0751		642.25	275.62
	O&G	0.0751	0.0250		275.62	91.75
	Lead	0.00113	0.000376		4.15	1.38
	Zinc	0.00150	0.000500		5.51	1.84
2:	METAL FINISHING POINT SOURCE CATEGORY					
	Subpart A, Metal Finishing					
	Electroplating (mg/L)			3 MGD		
A	TSS	60	31		1502.1	776.09
	O&G	52	26		1301.82	650.91
	Lead (Total)	0.69	0.43		17.27	10.77
	Chromium (Total)	2.77	1.71		69.35	42.81
	Nickel (Total)	3.98	2.38		99.64	59.58
	Silver (Total)	0.43	0.24		10.77	6.01

STEP 2: Determine the Mass Limitations for each pollutant of concern

Category	TSS Mass Limitations	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
1:	Subpart I, Acid Pickling:		
A	Sulfuric Acid Pickling, Strip, sheet and plate	121.72	52.07
B	Hydrochloric Acid Pickling, Strip, sheet and plate	869.37	371.98
C	Fume Scrubbers	12.6	5.40
D	Acid Regeneration (absorber vent scrubber)	84.216	35.935
	Subpart J, Cold Forming		
E	Recirculation: Multiple Stands	66.53	33.27
F	Combination (lbs/1000lb)	236.11	118.21
G	Direct application: Single Stand	107.325	53.90
H	Subpart K, Alkaline Cleaning, Continuous	1497.16	642.90
I	Subpart L, Hot Coating, Galvanizing, Strip, sheet, and misc. products	642.25	275.62
2:	METAL FINISHING POINT SOURCE CATEGORY		
A	Subpart A, Metal Finishing, Electroplating	1502.1	776.09
	<b>Total Mass Limitation (lbs/day)</b>	<b>5139.38</b>	<b>2365.38</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>2331.22</b>	<b>1072.93</b>

Category	O&G Mass Limitations	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
1:	Subpart J, Cold Forming		
E	Recirculation: Multiple Stands	27.74	11.05
F	Combination (lbs/1000lb)	98.41	39.3
G	Direct application: Single Stand (lbs/1000lb)	44.79	17.94
H	Subpart K, Alkaline Cleaning, Continuous	642.9	214.3
I	Subpart L, Hot Coating, Galvanizing, Strip, sheet, and misc. products	275.62	91.75
2:	METAL FINISHING POINT SOURCE CATEGORY		
A	Subpart A, Metal Finishing, Electroplating	1301.82	650.91
	<b>Total Mass Limitation (lbs/day)</b>	<b>2391.28</b>	<b>1025.25</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>1084.69</b>	<b>465.05</b>

Category	Lead (Pb) Mass Limitations	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
1:	Subpart I, Acid Pickling:		
A	Sulfuric Acid Pickling, Strip, sheet and plate	0.782	0.261
B	Hydrochloric Acid Pickling, Strip, sheet and plate	5.59	1.86
C	Fume Scrubbers	0.081	0.027
D	Acid Regeneration (absorber vent scrubber)	0.54	0.181
	Subpart J, Cold Forming		
E	Recirculation: Multiple Stands	0.498	0.166
F	Combination	1.77	0.591
G	Direct application: Single Stand	0.806	0.179
I	Subpart L, Hot Coating, Galvanizing, Strip, sheet, and misc. products	4.15	1.38

2:	METAL FINISHING POINT SOURCE CATEGORY		
A	Subpart A, Metal Finishing, Electroplating	17.27	10.77
	<b>Total Mass Limitation (lbs/day)</b>	<b>31.49</b>	<b>15.51</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>14.28</b>	<b>7.03</b>

Category	Mass Limitations Zinc	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
1:	Subpart I, Acid Pickling:		
A	Sulfuric Acid Pickling, Strip, sheet and plate	1.044	0.347
B	Hydrochloric Acid Pickling, Strip, sheet and plate	7.45	2.49
C	Fume Scrubbers	0.108	0.036
D	Acid Regeneration (1 unit) (absorber vent scrubber)	0.721	0.240
	Subpart J, Cold Forming		
E	Recirculation: Multiple Stands	0.333	0.111
F	Combination	1.18	0.393
G	Direct application: Single Stand	0.539	0.179
I	Subpart L, Hot Coating, Galvanizing, Strip, sheet, and misc. products	5.51	1.84
	<b>Total Mass Limitation (lbs/day)</b>	<b>16.89</b>	<b>5.64</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>7.66</b>	<b>2.56</b>

Category	Mass Limitations Total Chromium	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
2:	METAL FINISHING POINT SOURCE CATEGORY		
A	Subpart A, Metal Finishing, Electroplating	69.35	42.81
	<b>Total Mass Limitation (lbs/day)</b>	<b>69.35</b>	<b>42.81</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>31.46</b>	<b>19.42</b>

Category	Mass Limitations Total Nickel	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
2:	METAL FINISHING POINT SOURCE CATEGORY		
A	Subpart A, Metal Finishing, Electroplating	99.64	59.58
	<b>Total Mass Limitation (lbs/day)</b>	<b>99.64</b>	<b>59.58</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>45.2</b>	<b>27.03</b>

Category	Mass Limitations Total Silver	Daily Maximum (lbs/day)	Monthly Average (lbs/day)
2:	METAL FINISHING POINT SOURCE CATEGORY		
A	Subpart A, Metal Finishing, Electroplating	10.77	6.01
	<b>Total Mass Limitation (lbs/day)</b>	<b>10.77</b>	<b>6.01</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>4.89</b>	<b>2.73</b>

Category	Mass Limitations Naphthalene	Daily Maximum (lbs/day)
	Subpart J, Cold Forming	
E	Recirculation: Multiple Stands	0.111
F	Combination	0.393
G	Direct application: Single Stand	0.179
	<b>Total Mass Limitation (lbs/day)</b>	<b>0.683</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>0.31</b>

Category	Mass Limitations Tetrachloroethylene	Daily Maximum (lbs/day)
	Subpart J, Cold Forming	
E	Recirculation: Multiple Stands	0.166
F	Combination	0.591
G	Direct application: Single Stand	0.269
	<b>Total Mass Limitation (lbs/day)</b>	<b>1.026</b>
	<b>Total Mass Limitation (kg/day)</b>	<b>0.465</b>

## **ATTACHMENT 2 – RPA RESULTS FOR PRIORITY POLLUTANTS**

[illegible]

### USS-POSCO Reasonable Potential Analysis Results

[illegible]

## **ATTACHMENT 3 – CALCULATIONS FOR FINAL WQBELs**

USS-POSCO Industries  
WQBEL Calculation

PRIORITY POLLUTANTS	Copper	Cyanide	Chlorodibromo- methane	Dichlorobromo- methane
Units	ug/L	ug/L	ug/L	ug/L
Basis and Criteria type	CTR SW	CTR SW	CTR HH	CTR HH
Lowest Dissolved WQO	3.10	1.00	4.10E-01	5.60E-01
Translators	0.8			
Dilution Factor (D) (if applicable)	0	0	0	0
No. of samples per month	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	N	N
HH criteria analysis required? (Y/N)	Y	Y	Y	Y
Applicable Acute Total WQO	5.78	1.0	NA	NA
Applicable Chronic Total WQO	3.73	1.0	NA	NA
HH criteria	1300.0	700.0	0.41	0.56
Background (max conc for Aq Life calc)	4.613	0.5		
Background (avg conc for HH calc)	3.539	0.425	0.5	0.5
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	N
ECA acute	5.8	1		
ECA chronic	3.7	1		
ECA HH	1300	700	0.41	0.56
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	Y	Y
Avg of effluent data points	3.100			
Std Dev of effluent data points	1.240			
CV calculated	0.40	N/A	N/A	N/A
CV (Selected) - Final	0.40	0.6	0.6	0.6
ECA acute mult99	0.44	0.32		
ECA chronic mult99	0.64	0.53		
LTA acute	2.54	0.32		
LTA chronic	2.40	0.53		
minimum of LTAs	2.40	0.32		
AMEL mult95	1.36	1.55	1.55	1.55
MDEL mult99	2.27	3.11	3.11	3.11
AMEL (aq life)	3.26	0.50		
MDEL(aq life)	5.47	1.00		
MDEL/AMEL Multiplier	1.67	2.01	2.01	2.01
AMEL (human hlth)	1300.00	700	0.41	0.56
MDEL (human hlth)	2176.96	1404	0.82	1.12
minimum of AMEL for Aq. life vs HH	3.26	0.50	0.41	0.56
minimum of MDEL for Aq. Life vs HH	5.47	1.00	0.82	1.12
Current limit in permit (30-d avg) (final/interim)				
Current limits in permit (daily) (final/interim)	4.9			
Final limit - AMEL	3.3	0.5	0.41	0.56
Final limit - MDEL	5.5	1.0	0.82	1.12
Max Effl Conc (MEC)	7.6	6	1.90	1.90



## ATTACHMENT G – CHRONIC TOXICITY – DEFINITIONS OF TERMS AND SCREENING PHASE REQUIREMENTS

### CHRONIC TOXICITY

#### DEFINITION OF TERMS & SCREENING PHASE REQUIREMENTS

##### **I. Definition of Terms**

- A. No observed effect level (NOEL) for compliance determination is equal to  $IC_{25}$  or  $EC_{25}$ . If the  $IC_{25}$  or  $EC_{25}$  cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.
- B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber.  $EC_{25}$  is the concentration of toxicant (in percent effluent) that causes a response in 25% of the test organisms.
- C. Inhibition Concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an  $IC_{25}$  is the estimated concentration of toxicant that would cause a 25% reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.
- D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

##### **II. Chronic Toxicity Screening Phase Requirements**

- A. The Discharger shall perform screening phase monitoring:
  - 1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or
  - 2. Prior to Permit reissuance. Screening phase monitoring data shall be included in the NPDES Permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.
- B. Design of the screening phase shall, at a minimum, consist of the following elements:
  - 1. Use of test species specified in Tables 1 and 2 (attached), and use of the protocols referenced in those tables, or as approved by the Executive Officer;
  - 2. Two stages:

- a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Table 3 (attached); and
    - b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.
  3. Appropriate controls; and
  4. Concurrent reference toxicant tests.
- C. The Discharger shall submit a screening phase proposal to the Executive Officer for approval. The proposal shall address each of the elements listed above.

**TABLE 1**  
**CRITICAL LIFE STAGE TOXICITY TESTS FOR ESTUARINE WATERS**

TEST SPECIES	(Scientific name)	EFFECT	DURATION	REFERENCE
alga	( <u>Skeletonema costatum</u> ) ( <u>Thalassiosira pseudonana</u> )	growth rate	4 days	1
red alga	( <u>Champia parvula</u> )	number of cystocarps	7-9 days	3
Giant kelp	( <u>Macrocystis pyrifera</u> )	percent germination; germ tube length	48 hours	2
abalone	( <u>Haliotis rufescens</u> )	abnormal shell development	48 hours	2
oyster mussel	( <u>Crassostrea gigas</u> ) ( <u>Mytilus edulis</u> )	{abnormal shell development; {percent survival	48 hours	2
Echinoderms (urchins - (sand dollar -	<u>Strongylocentrotus purpuratus</u> , <u>S. franciscanus</u> ); <u>Dendraster excentricus</u> )	percent fertilization	1 hour	2
shrimp	( <u>Americamysis bahia</u> )	percent survival; growth	7 days	3
shrimp	( <u>holmesimysis costata</u> )	percent survival; growth	7 days	2
topsmelt	( <u>Atherinops affinis</u> )	percent survival; growth	7 days	2
silversides	( <u>Menidia beryllina</u> )	larval growth rate; percent survival	7 days	3

**Toxicity Test References:**

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for conducting static 96-hour toxicity tests with microalgae. Procedure E 1218-90. ASTM Philadelphia, PA.
2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. USEPA/600/R-95/136. August 1995
3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms as specified in 40CFR 136. Currently, this is USEPA/600/4-90/003, July 1994. Later editions may replace this version.

**TABLE 2**  
**CRITICAL LIFE STAGE TOXICITY TESTS FOR FRESH WATERS**

SPECIES	(Scientific name)	EFFECT	TEST DURATION	REFERENCE
fathead minnow	( <u>Pimephales promelas</u> )	survival; growth rate	7 days	4
water flea	( <u>Ceriodaphnia dubia</u> )	survival; number of young	7 days	4
alga	( <u>Selenastrum capricornutum</u> )	cell division rate	4 days	4

**Toxicity Test Reference:**

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms as specified in 40CFR 136. Currently, this is the third edition, USEPA/600/4-91/002, July 1994. Later editions may replace this version.

**TABLE 3**

**TOXICITY TEST REQUIREMENTS FOR STAGE ONE SCREENING PHASE**

REQUIREMENTS	RECEIVING WATER CHARACTERISTICS		
	Discharges to Coast	Discharges to San Francisco Bay ‡	
	Ocean	Marine/Estuarine	Freshwater
Taxonomic Diversity:	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type: Freshwater (†):	0 4	1 or 2 3 or 4	3 0
Marine/Estuarine:			
Total number of tests:	4	5	3

† The fresh water species may be substituted with marine species if:

- 1) The salinity of the effluent is above 1 parts per thousand (ppt) greater than 95% of the time, or
- 2) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

‡ Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95% of the time during a normal water year.

Fresh refers to receiving water with salinities less than 1 ppt at least 95% of the time during a normal water year.